Arizona State University

Course Catalog Archive
2010-2011

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

Course Component	Description
Fieldwork (FLD)	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.
Individualized Instruction (IND)	A class in which an individual student is provided an opportunity for original study or investigation in a major or field of specialization on a more autonomous basis. Normally a contract or plan is used and supervised by faculty and/or practitioners.
Integrated Lecture/Lab (LEL)	Integrated lecture/lab is a class that has some lecture and some hands-on components but do not require a separate time like a traditional lab.
Laboratory (LAB)	The hands-on, workshop component of a class usually held in a laboratory. The laboratory time is separate from the lecture although it is often associated to a lecture(s).
Lecture (LEC)	A traditional method of instruction in which students are taught a subject by a member of the faculty.
Practicum (PRA)	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely. Internships and student teaching fit into this category. These classes are often held off campus at a professional location.
Recitation (REC)	Recitations are small interactional meetings that combine formal presentations, review, and interaction between the students and an instructor. These are small interactional meetings and are usually combined with a lecture as the primary component. Recitations are often lead by teaching assistants (TAs) or graduate assistants (GAs) to supplement a lecture. TAs/GAs review the lecture, expand on the concepts, and usually allow for question/answer time.
Research (RSC)	Under the supervision of a faculty member or group of faculty, student conducts research that is expected to lead to a specific project such as dissertation, thesis, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.
Seminar (SEM)	A small class emphasizing discussion, presentations by students, and written research papers.
Studio (STO)	A hands-on workshop component of design and the arts courses.
Thesis (THE)	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.
Discussion (DIS)	Discussions are small interactional meetings that combine formal presentations, review, and interaction between the students and an instructor. They are usually combined with a lecture as the primary component.

Grading Option	Description
AUD	Audit
CNV	Conversion
ELG	Enhanced Learning Grading Basis
GNA	Graded with No Audit
LAW	Law Numeric
OP4	Student Option – P/F/Z or Audit
OP5	Student Option – Honors/High Honors or Audit
OP6	Student Option – Standard Grading or Audit
OPT	Student Option – Standard Grading or Audit
P/F	Pass/Fail
YGB	Y (Satisfactory) Grading Basis
Z1	Standard Grading with Z Option
Z2	Pass/Fail with Z Option
Z3	Continuing registration

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

Course Prefix	Description
CCS	Chicana and Chicano Studies
CDE	Child Development
CED	Counselor Education
CEE	Civil and Environmental Engineering
CEN	Computer Engineering
CHE	Chemical Engineering
CHI	Chinese
CHM	Chemistry
CHP	Community Health Practice
CIM	Concrete Industry Management
CIS	Computer Information Systems
CLS	Clinical Laboratory Sciences/Medical Technology
CMN	Communication Studies
COE	College of Education
COM	Communication
CON	Construction
CPI	Computing & Informatics
CPP	College of Public Programs
CPY	Counseling Psychology
CRD	Community Resources and Development
CRJ	Criminology and Criminal Justice
CSE	Computer Science and Engineering
CSS	Chicana and Chicano Studies Social Science
CST	Computing Studies
DAH	Dance History
DAN	Dance
DCE	Dance
DCI	Curriculum and Instruction
DNP	Doctor of Nursing Practice
DSC	Design
EAC	Early Childhood East
ECD	Early Childhood Education
ECE	Engineering Core
ECN	Economics
ECT	Early Childhood Teaching and Leadership
EDA	Education Administration and Supervision
EDC	Education (Polytechnic Programs)
EDP	Educational Psychology
EDT	Educational Technology
EED	Elementary Education
EEE	Electrical Engineering
EET	Electronics Engineering Technology
EGR	Engineering
ELL	English as a Second Language
ELS	Environmental Life Sciences
ENE	Engineering Education
ENG	English
EPA	Education Policy Analysis
EPD	Environmental Design and Planning
ESS	Environmental Social Science
EST	Electronic Systems Technology
ETH	Ethnic Studies
ETM	Environmental Technology Management
EVO	Evolutionary Biology
EXW	Exercise and Wellness
FAS	Family Studies

Course Prefix	Description
FIN	Finance
FMP	Film and Media Production
FMS	Film and Media Studies
FRE	French
FSA	Fire Service Administration
FSE	Fulton School of Engineering
FSM	Fire Service Management
GB	Business Law
GCU	Cultural Geography
GER	German
GIT	Graphic Information Technology
GLB	Global Business
GLG	Geological Sciences
GPH	Physical Geography
GRA	Graphic Design
GRD	Graduate Education
GRK	Ancient Greek
GTD	Global Technology and Development
HCR	Health Care Related
HDA	Herberger Institute for Design and the Arts
HEB	Hebrew
HED	Higher and Postsecondary Education
HES	Health Science
HHE	Healthcare and Healing Environments
HIN	Hindi Studies
HON	Honors
HPS	History and Philosophy of Science
HSC	Health Sciences
HSD	Human and Social Dimensions Science and Technology
HSM	Health Sector Management
HST	History
HTY	History
HUD	Housing and Urban Development
HUM	Humanities
IA	Integrative Studies
IAP	Interdisciplinary Arts and Performance
IAS	Integrative Studies
IBC	Integrated Behavioral Care
IBS	International Business Studies
IDN	Indonesian
IED	Indian Education
IEE	Industrial Engineering
IMD	Instructional Media
IND	Industrial Design
INT	Interior Design
ITA	Italian
JAC	Joint Admission Continuous Enrollment
JHR	Social Justice and Human Rights
JMC	Journalism and Mass Communication
JPN	Japanese
JST	Jewish Studies
JUS	Justice Studies
KE	Kinetics Engineering
KIN	Kinesiology
KOR	Korean
LAA	Landscape Architectural Administration

Course Prefix	Description
LAP	Landscape Architecture Professional Studies
LAT	Latin
LAW	Law
LDE	Landscape Architectural Design&Technology Studies
LES	Legal and Ethical Studies
LIA	Liberal Arts and Sciences
LIM	Leadership in International Management
LIN	Linguistics
LIS	Library Science
LNP	Landscape Analysis and Programming
LPH	Landscape Architectural Philosophy and History
LSC	Life Sciences
LTC	Landscape Architectural Technology
MA	Mathematics
MAE	Mechanical and Aerospace Engineering
MAK	Macedonian
MAS	Masters of Arts in Interdisciplinary Studies
MAT	Mathematics
MBB	Molecular Biosciences/Biotechnology
MCB	Molecular and Cellular Biology
MCE	Multicultural Education
MCO	Mass Communication
MDL	Medical Laboratory Science
MET	Mechanical & Manufacturing Engineering Technology
MGT	Management
MHI	Master of Healthcare Innovation
MHL	Music History/Literature
MIC	Microbiology
MIS	Military Science
MKT	Marketing
MLS	Master of Liberal Studies
MPH	Masters in Public Health
MSE	Materials Science and Engineering
MSI	Music Scholarly Inquiry
MTC	Music Theory and Composition
MTE	Mathematics Education
MU	Music
MUD	Urban Design
MUE	Music Education
MUP	Music Performance
MUS	Music
NAN	Nanoscience
NAV	Naval Science
NEU	Neuroscience
NLM	Nonprofit Leadership and Management
NTR	Nutrition
NUR	Nursing
OMT	Operations Management Technology
OPM	Operations and Production Management
PAF	Public Affairs
PGM	Professional Golf Management
PGS	Psychology (Social and Behavioral)
PGV	Public Policy and Government
PHI	Philosophy
PHL	Philosophy
PHS	Physical Sciences

Course Prefix	Description
PHY	Physics
PLA	Landscape Architecture
PLB	Plant Biology
PLC	Polish Languages and Culture
POR	Portuguese
POS	Political Science
PPE	Physical Education East
PRM	Parks and Recreation Management
PSY	Psychology
PUB	Scholarly Publishing
PUP	Urban and Environmental Planning
QBA	Quantitative Business Analysis
RDG	Reading Education
REA	Real Estate
REC	Recreation Management and Tourism
RED	Real Estate Development
REL	Religious Studies
ROM	Romanian
RTM	Recreation and Tourism Management
RUS	Russian
SAO	Study Abroad Office
SBS	Social and Behavioral Sciences
SCM	Supply Chain Management
SCN	Science Education
SED	Secondary Education
SEM	Science and Engineering of Materials
SES	Earth and Space Exploration
SET	Security Engineering Technology
SGS	School of Global Studies
SHS	Speech and Hearing Science
SLC	School of International Letters and Cultures
SLV	Slavic
SMC	Simulation, Modeling and Applied Cognitive Science
SOC	Sociology
SOS	School of Sustainability
SPA	Spanish
SPE	Special Education
SPF	Social and Philosophical Foundations
SSH	Social Science and Health
STM	Science, Technology, Engineering and Mathematics
STP	Statistics and Probability
STS	Science, Technology, and Society
SWG	Social Work (Graduate)
SWU	Social Work (Undergraduate)
TA	Aeronautical Mngmnt Technology
TCL	Transborder Chicana/o and Latina
TDM	Tourism Development and Management
TEL	Teacher Education and Leadership
THA	Thai
THE	Theatre
THP	Theatre Performance and Production
TMC	Technology Management Core
TWC	Multimedia Writing and Technical Communication
UET	Microelectronics Engineering Technology
UNI	University
UPH	Urban Public Health

Course Prefix	Description
URB	Urban and Metropolitan Studies
USL	University Service Learning
VTN	Vietnamese
WAC	Writing Across the Curriculum
WPC	W.P. Carey School of Business
WST	Women's Studies
YDL	Youth Development Leadership

Summer 2010

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AAD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AAD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design MS student
AAD	**551**	Architectural Management I	Design delivery, coordination of construction documents, cost estimating, bidding and negotiations, construction observation, and postconstruction services.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be either Bldg Des(Facilities Dev/Mgt) Graduate Architecture student
AAD	**552**	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	**555**	Architect as Developer	Development building, real estate, construction funding, land acquisition, and the sources for capital.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ABS	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ABS	**207**	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**225**	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101 or CHM 113
ABS	**226**	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	
ABS	**260**	Fundamentals of Urban Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
ABS	**270**	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**274**	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**301**	Technology and Biology	Demonstrations of a broad range of innovative technologies in molecular biology, cellular and organismal biology, horticulture, and wildlife and restoration ecology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**302**	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**311**	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**312**	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: BIO 187
ABS	**350**	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	
ABS	**355**	Anatomy and Physiology of Vertebrates	Evolution, Classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology ,specializations and conservation status of the vertebrates.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**360**	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**362**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: ABS 260
ABS	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**364**	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 260
ABS	**368**	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 188
ABS	**370**	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 188
ABS	**372**	Ecology: Ecosystems and Landscapes	Structure and function of ecosystems, interactions of pattern and process in landscapes	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 370

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ABS	**375**	Conservation Biology	Principles of conservation biology, management of threatened species and ecosystems, biodiversity patterns; emphasizes issues in the Southwest. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 & BIO 188
ABS	**376**	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**378**	Wildlife Nutrition	Principles of nutrient metabolism in wildlife species; emphasizes understanding the interaction of wildlife with their environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**380**	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**381**	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**401**	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**402**	Vegetation and Wildlife Measurement	Vegetation inventory, sampling, monitoring, and evaluation. Methods of estimating wildlife populations, activity, and home ranges.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**425**	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**430**	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**433**	Riparian and Wetland Ecology	Functions and components of riparian and wetland ecosystems and the management of these systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**434**	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**435**	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**440**	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**441**	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects. fee	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**460**	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**462**	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**465**	Senior Enterprise Project	Selection and completion of an urban horticulture project with faculty advisor approval related to the field of study.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**470**	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**471**	Ornithology	Classification and biology of birds, emphasizing North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**475**	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**476**	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**480**	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	
ABS	**481**	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**482**	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**483**	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning. Fee.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**485**	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**486**	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**489**	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**490**	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6		
ABS	**493**	Honors Thesis		N	THE	N	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6	L	Pre-requisites: Must be an Honors student
ABS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-7		
ABS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**540**	Plant Responses to Environmental Stresses	Reaction of plants to environmental stresses: aerial pollutants, fire, herbivores, floods, mechanical treatments, pesticides, and soil amendments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**550**	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**551**	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**553**	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**560**	Dynamic Spatial Modeling	Simulation modeling of landscapes, animal populations, and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**570**	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**586**	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ACC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**231**	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Not open to Pre-BIS or Interdisciplinary Studies students; CIS 105, 220 or 236 with C or better
ACC	**241**	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: ACC 231, ACC 261 or ACC 303 with C or better
ACC	**261**	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	**271**	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**315**	Financial Accounting and Reporting	Accounting theory and practice related to uses of financial statements by external decision makers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 231 and ACC 241 with C or better
ACC	**316**	Mgmt Uses of Accounting	Uses of accounting information for managerial decision making, budgeting, and control.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 241 with C or better
ACC	**326**	External Financial Reporting I	Theory, U.S. standards, and practice applicable to financial statements, revenue recognition, and assets.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**327**	External Financial Reporting II	Theory, U.S. standards, and practice applicable to equities, cash flow statement, earnings per share, leases, pensions, and other essential topics.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: School of Global Management and Leadership Accountancy student; ACC 326 with C or better
ACC	**336**	Cost Management and Control	Concepts and principles for product costing, planning and control, and internal decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**340**	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy or Finance BS student; ACC 241 or ACC 271, and ECN 221 with a grade of C or better. Pre- or co-requisite: FIN 300 or FIN 302 or FIN 303.
ACC	**346**	Information Systems Management	Information requirements and transaction processing for integrated accounting systems emphasizing database systems analysis and design, controls, and computer processing.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS or a Global Management student with Professional status
ACC	**350**	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241 or ACC 271, and ECN 221 with a grade of C or better.
ACC	**356**	Income Tax Accounting	Public policy concepts and rules of federal income tax for all taxpayers. Individual tax returns and use of tax software.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 with C or better
ACC	**361**	Accounting Technology	Use and understanding of a computerized accounting package and other software for accounting applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 and 336 and 346 with C or better
ACC	**382**	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Non-Accountancy student; Must have minimum ASU cumulative GPA of 2.00 and at least 56 total earned hours OR be a non-degree seeking student or a Graduate student
ACC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**410**	Contemporary Financial Reporting	Topics include financial statements, roles and effects of accounting information in society, policy setting, managers' choice of accounting techniques. Cannot be used for major credit in Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Business/Financial Mgt BS student AND have completed with a C or better FIN 300 or 301 or be currently enrolled or not be pursuing an Accountancy or Professional Accountancy certificate
ACC	**426**	Advanced Reporting: Consolidation, International, and Not-for-Profit Topics	Consolidated financial statements, not-for-profit accounting, and international accounting standards and topics including foreign currency transactions and translation.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326.
ACC	**430**	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 340 and LES 305 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	**436**	Advanced Topics in Cost Management	Issues in contemporary manufacturing environments. Topics include cost estimation, activity-based management, just-in-time inventories, budgeting, and variances.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326, 331 or 336 or be currently enrolled
ACC	**440**	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	**444**	Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241 or ACC 271, and ECN 221 with a grade of C or better.
ACC	**450**	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations. fee	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 and 444 with C or better
ACC	**476**	External Auditing	Theory and standards underlying the attestation process. Topics include evidence gathering, analysis, reporting, and development of professional judgement skills.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR Accountancy or Professional Accountancy Certificate; ACC 322 or 327 with C or better; ACC 346 or 347 with C or better
ACC	**477**	Internal Auditing	Contemporary issues and practices of internal auditing. Standards and process of management/operation audits.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326 or ACC 346 or 347.
ACC	**478**	Governmental and Not-for-Profit Accounting	Accounting and reporting systems for governmental entities, healthcare organizations, colleges and universities, and other nonprofit organizations.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 321 or 326 or be currently enrolled
ACC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**493**	Honors Thesis		N	THE	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Pre-requisites: Must be an Honors student
ACC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Pre-requisite: Accountancy BS, Finance BS or Economics BS student
ACC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	**502**	Financial Accounting	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**503**	Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**511**	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**512**	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Master of Accounting student
ACC	**513**	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Specific Business Graduate majors
ACC	**525**	Accounting Theory	Examines GAAP and the broader implications of financial accounting in a market economy while balancing the varied interests of diverse stakeholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: must be in the Accountancy & Appl Leadership graduate plan.
ACC	**529**	Fraud Accounting	Surveys a variety of topics, including types of fraud, the prevention and detection of fraud, and fraud investigations.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**536**	Advanced Topics in Cost Management	Emphasizes cost management topics for manufacturing, merchandising, and service industries while adopting the perspective of the user of cost management information.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**561**	Auditing Through the Computer	Presents general IT audit concepts, terms, standards, practices, and current tools and techniques.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**567**	Financial Models in Accounting Systems	Development and application of financial models by accountants. Analysis of decision support systems as financial modeling environments.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisites: Specific Business Graduate students only
ACC	**571**	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	**573**	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**575**	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**577**	Internal Auditing	Examines the vocabulary, concepts, logic, principles, processes, and techniques of auditing.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: must be in the Accountancy & Appl Leadership graduate plan.
ACC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**582**	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**585**	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Business Graduate student
ACC	**586**	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**588**	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	**589**	Multijursidictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Taxation student
ACC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**596**	Accounting and Leadership Capstone Project	Case-based course dealing with the pragmatics of managing risk in a variety of business settings, including public accounting, consulting, and industry.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		

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ACC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student
ACC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		
ACC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		
ACO	**100**	Overview of Applied Computing	Internet and HTML, XML, databases, networks and distributed processing, digital media and graphic design. Opportunities, professionalism, and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
ACO	**101**	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: MAT117 or higher with C or better
ACO	**102**	Principles of Computer Science	Issues and concepts throughout computer science, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Java programming. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 101 with C or better
ACO	**201**	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	**210**	Introduction to Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 201 with C or better
ACO	**220**	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-reqiusites: ACO 201 and MAT 243 with C or better
ACO	**320**	Database Systems and Transaction Processing	Relational database normalization theory, stored procedures, triggers, and call-level interface. Data-centric XML. Transaction processing in centralized and distributed databases. Security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 220 with C or better
ACO	**330**	Computer Networks	Network architecture and protocols, flow and congestion control, switching and routing, link-layer technologies, medium access control, physical layer basics, quality-of-service, security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 102 with C or better
ACO	**331**	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 330 with C or better
ACO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACO	**420**	Object Databases	Object-oriented conceptual modeling, object-oriented databases, object-relational databases, applications. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**421**	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**422**	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**430**	Wireless Networks	Wireless transmission fundamentals, multiple access techniques, error detection and control, cellular concepts and systems, wireless LAN, performance analysis, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and STP 300 with C or better
ACO	**431**	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and MAT 243 with C or better
ACO	**432**	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210 and ACO 330 with C or better
ACO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
ACO	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
ACO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
ACO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
ADE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**321**	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Architecture student; ALA 240 with C or better
ADE	**322**	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must have completed ADE 321 with a grade of C or better or be currently enrolled; must be an Architectural Studies student
ADE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**421**	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451, ARP 484
ADE	**422**	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must be an Architectural Studies student; Must have completed ADE 421 with a grade of C or greater or be currently enrolled; Must have completed ARP 484 with a grade of Y or be currently enrolled
ADE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ADE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ADE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ADE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ADE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	**510**	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**511**	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 510 with a grade of C or greater or be currently enrolled
ADE	**512**	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 511 with a grade of C or greater or be currently enrolled
ADE	**521**	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**522**	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ADE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**621**	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**622**	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**661**	Bioclimatic Design Studio	Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must either be Master of Architecture or Bldg Des(Energy Perform/Bldgs) MS student
ADE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AEC	**10-D**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-D**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-D**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-M**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**30**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-D**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-M**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**50-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**50-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

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AEC	**60-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-D**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-M**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75-D**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75-M**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-D**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-M**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-D**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-M**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**83**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-D**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-M**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**84**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-D**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-M**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

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AEC	**98-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**20**	Listening/Speaking		N	LEC	N	GNA	University College	NC American English and Culture Program	3-9		
AEC	**20-D**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**20-M**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**40**	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		

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AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
AEP	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for PHI 501, or REL 581, may not enroll in AEP 501
AEP	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Completed AEP 501. Students with credit in PHI 502 or REL 582, may not enroll in AEP 502
AEP	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-reqiuistes: AEP 501 and AEP 502 with a D or better; students who have credit for PHI 550 or REL 585, may not enroll in AEP 550

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AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
AES	**101**	Air Force Today I	Introduces U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**102**	Leadership Lab	Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**103**	Air Force Today II	Continuation of AES 101. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**104**	Leadership Lab	Continuation of AES 102 with more in-depth emphasis on learning the environment of an Air Force officer.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	**201**	The Evolution of USAF Air and Space Power I	Further preparation of the AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, quality Air Force, and values.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**202**	Leadership Lab	Application of advanced drill and ceremonies, issuing commands, knowing flag etiquette, and developing, directing, and evaluating skills to lead others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**203**	The Evolution of USAF Air and Space Power II	Continuation of AES 201. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**204**	Leadership Lab	Continuation of AES 202 with emphasis on preparation for field training.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AES	**301**	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**302**	Leadership Lab	Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**303**	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**304**	Leadership Lab	Continuation of AES 302 with emphasis on planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**401**	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**402**	Leadership Lab	Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**403**	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.		
AES	**404**	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		
AES	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		
AET	**191**	First-Year Seminar		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**210**	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: PHY 112; Pre or Co-reqs: APM 266
AET	**215**	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
AET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**300**	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	**310**	Instrumentation	Measurement systems, components, system response, and the characteristics of experimental data. Methods of collecting and analyzing data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MAT 266 or MAT 271; AET 210
AET	**312**	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 211 (or CON 221 or ETC 211 or ECE 210 or MAE 212); MAT 266 (or MAT 271)
AET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**396**	Aerospace Professional Orientation	Career focus for Aeronautical Engineering Technology students. Familiarization with the aerospace industry.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or higher academic level
AET	**415**	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 OR Technology and Innovation or Fulton Engineering Graduate student
AET	**417**	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or ECE 313) with D or better; AET 312 (or ECE 312) with D or better; AET 300 with D or better OR Technology and Innovation or Fulton Engineering graduate student
AET	**420**	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: AET 300; MET432

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AET	**432**	Applied Heat Transfer	Heat transfer by conduction, convection, and radiation. Applies heat transfer to engineering design problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre- requisites: ETC 340 or MET 340 with D or better (or co-enrolled in ETC 340); may not enroll in AET 432 if credit received in AET 524
AET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Technology and Innovation BS student; Minimum cumulative GPA of 3.00; Minimum Junior standing
AET	**487**	Aircraft Design II	Basic aerodynamics and airplane performance analysis methods applied to practical design project.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 300; AET 417
AET	**492**	Honors Directed Study		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6		
AET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
AET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**524**	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 with D or better; May not enroll in AET 524 if you have credit in AET 432
AET	**525**	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 434, AET 415 or MAE 340
AET	**560**	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Technology Innovation or Fulton Engineering students; Senior or higher academic level
AET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
AFH	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & H & G	
AFH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**300**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**303**	African and African American Art	Anthropological perspective of African and African American visual art traditions from the past to 1970.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**305**	The Global History of the Trans-Atlantic Slave Trade	Origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**318**	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & G	
AFH	**319**	Black Experience in Latin America	Examines several aspects of the experience of Africans in the Latin America diaspora; comparisons with United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**331**	Studies in African American Women Writers of Pre-Harlem Renaissance	Focuses on novels, short stories, essays, speeches, and dramas that gave voices to African American woman in pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**335**	Survey of African Literatures	Intersection of colonialism, race, class, gender, nationalism, postcoloniality, social transformation, and ethnicity in African writers' fiction and literary production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees. Fee (hybrid/Internet).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
AFH	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
AFH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	
AFH	**465**	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**492**	Honors Directed Study		N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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AFR	**191**	First Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**210**	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**317**	Genes, Race and Society	Examines history of biological and social constructions of race in western society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFR	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Students who have credit for TCL 335, may not enroll in AFR 335
AFR	**375**	Race, Gender and Sport	Interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**428**	Critical Race Theory	Examines ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**429**	African American Studies Theory and Methods	Examines social and behavioral science theories and methodological procedures pertaining to African Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**460**	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**490**	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
AFR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**525**	Foundations of Caribbean Studies	Broad interdisciplinary understanding of the Caribbean that surveys the region's history, politics, economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**526**	Selected Topics in Caribbean Politics	In-depth understanding of the impact of selected topics on the political economy and social infrastructure of the Caribbean.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFR	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFS	**200**	Introduction to African and African Diaspora Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**301**	Race and Racism in Africa/African Diaspora	Construction of race, racism, and race relations in Africa/African Diaspora; practices of agency to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**304**	Islands of Globalization: Caribbean Political Economy	Impact of globalization on the economic, political, and social condition of the islands and mainland countries of the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**310**	African/African American Psychology	Historical and contemporary overview of the development of African/Black psychology and African American frame of reference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**312**	Contemporary African and African Diaspora Women	Explores recent literary, theoretical, and methodological themes concerning the study of African/African Diaspora women and the phenomena of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**320**	Africa: Politics, Environment, and Development	Uses African experience to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**327**	Human Rights in Africa	Comparative study of human rights focusing on colonial and post-colonial Africa from historical and contemporary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: ASB 222
AFS	**340**	The Making of Modern Africa	Events and processes leading to the colonization of Africa and subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**345**	The Making of the Caribbean Society	Historical socioeconomic and political factors and institutions creating the wider Caribbean from the 15th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**355**	Democracy and Civil Society in Africa	Examines contending perspectives on the state and civil society and democratic struggles using sub-Saharan Africa and case study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**360**	Black Families in the Diaspora: U.S. and Caribbean	Comparative study of historical and current themes in the structure and internal dynamics of African Diaspora families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**363**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**364**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C & H	
AFS	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**370**	Family, Ethnic, and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**415**	Black Political Thought and the Limits of Liberal Democracy	Black political and social thought; conflict between liberal democratic ideals and structures of domination and exploration from African Diaspora perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	

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AFS	**480**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**100**	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**161**	Computer Applications for Agribusiness Industries	Uses and integrates word processing, spreadsheets, and databases as tools for managing an agribusiness firm.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**271**	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**302**	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	G	Prerequisites: ECN 212 with grade of C or better
AGB	**321**	Agribusiness Marketing II	Examines the food marketing system with emphasis on the marketing institutions, arrangements, and methods for basic commodities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**333**	Agribusiness Finance II	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**340**	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**360**	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**366**	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**367**	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**372**	Introduction to Veterinary Practice Management Module I	Initial offering of a three-module program that is an overview of the operation of a veterinary practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**373**	Veterinary Practice Management Module II: Human Resources	Intermediate course of a three-module program covering human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**374**	Veterinary Practice Management Module III: Finance and Marketing	Final course of a three-module program covering financial and marketing issues faced by veterinary practice managers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**410**	Agribusiness Management II	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

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AGB	**411**	Agricultural Cooperatives	Organization, operation, and management of agricultural cooperatives.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**414**	Agribusiness Analysis	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	L	Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed BUA 440 or BUA 441 with a C or better.
AGB	**422**	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300
AGB	**424**	Agribusiness Sales	Principles and techniques of selling and merchandising in the agricultural and food industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**425**	Agricultural Marketing Channels	Operational stages of agricultural commodities in normal distribution systems and implementation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**429**	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	**431**	Intermediate Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**433**	Intermediate Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**434**	Agricultural Risk Management and Insurance	Strategies to manage agricultural price and business risk: derivatives, insurance, self-insurance, and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**435**	Agricultural Commodities	Trading on futures markets. Emphasis on the hedging practices with grains and meats. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: FIN 300 with a C or better.
AGB	**436**	Entrepreneurship and Financial Management ofE-Commerce	Uses lectures, case studies, and business plans to highlight challenges of starting and running a small business.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**440**	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**442**	Food and Industrial Microbiology	Food- and industrial-related microorganisms; deterioration and preservation of industrial commodities. Lecture, lab.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
AGB	**445**	Food Retailing	Food retail management. Discusses trends, problems, and functions of food retail managers within various retail institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300 with C or better.
AGB	**451**	Management Science	Focuses on the construction, solution, and interpretation of quantitative models used for management decision making in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
AGB	**452**	International Agricultural Policy	Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**454**	International Trade	International practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: FIN 300 with C or better
AGB	**455**	Resource Management	Explores differences between societal and individual valuations of natural resources; considers public policy versus market-based solutions to environmental concerns.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	SB	
AGB	**460**	Agribusiness Management Systems	Development and use of decision support systems for agribusiness management and marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: 56 hours or more; FIN 300; MGT 300; MKT 300
AGB	**465**	Organic Farming Technologies	Organic farming methods, including certification, soil fertility, planting, integrated pest management, irrigation, cover crops, rotations, and marketing farm products.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**470**	Comparative Nutrition	Effects of nutrition on animal systems and metabolic functions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**481**	Applied Microeconomics	Emphasizes application of the theory of the firm, theory of exchange, and consumer theory.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6		
AGB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AGB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-7		

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AGB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-3		
AGB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**511**	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**513**	Advanced Cooperatives	Advanced study of cooperatives and other nongovernmental organizations (NGO) focusing on management and proposal preparation for international agencies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**514**	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**528**	Advanced Agribusiness Marketing	Theory and analysis of marketing farm commodities, risks, and the effect of future trading on cash prices.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**529**	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**532**	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**535**	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**540**	Advanced Food Science	Chemical and physical nature of processed foods. Emphasizes food product development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**550**	International Agricultural Development	Transition of developing countries from subsistence to modern agriculture. Emphasis placed on implications for U.S. agribusiness working abroad.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**552**	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**554**	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**560**	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**561**	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**570**	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**581**	Advanced Agribusiness Policy	Policy-making history, structure, and process.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**589**	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AGB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
AGB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**701**	Advanced Agribusiness I	Advanced topics include demand analysis, empirical industrial organization, welfare economics, agricultural policy, international trade, and consumer behavior.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**702**	Advanced Agribusiness II	Topics include macromarketing, marketing research, futures and options markets, derivatives, risk management, financial innovation, and forecasting.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**703**	Agribusiness Research Methods	Survey course in current research methods in economics, marketing, finance, and management as applied to agribusiness topics. May be repeated for credit.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		
AGB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		
AIS	**180**	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**280**	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**285**	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**370**	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisite: AIS 180 with C or better
AIS	**380**	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		

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AIS	**420**	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	L	Pre-requisite: AIS 180 with C or better
AIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7		
AIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
ALA	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
ALA	**102**	Architecture, Landscape Architecture, and Society	Examines interrelationship between society and the landscape with emphasis on human involvement in shaping the landscape.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	G	
ALA	**121**	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student
ALA	**122**	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 121 with a C or better; Co-requisite: ALA 124
ALA	**124**	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 122
ALA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALA	**200**	Introduction to Architecture	Surveys issues and polemics affecting current architectural theory and practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**225**	Design Fundamentals III	Applies design fundamentals with an emphasis on architectural and landscape architectural issues.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with a C or better; Passed milestone; Co-requisite: ALA 227 and ALA 235;
ALA	**226**	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: ALA 225 with C or better
ALA	**227**	Design Fundamentals III Lecture	History and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 225 and ALA 235
ALA	**235**	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisites: Architecture or Landscape Architecture student; Co-requisites: ALA 225 and ALA 227
ALA	**240**	Building Construction	Fundamentals of building construction through digital simulation of case study buildings. Construction systems, detailing, and conventions by building 3-dimensional digital model.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be either Pre-Architectural Studies or Pre-Landscape Architecture student; Co-requisites: ALA 222 and ALA 224
ALA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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ALD	**101**	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	
ALD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**202**	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**203**	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	**204**	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**301**	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**404**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**420**	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**431**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**440**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**460**	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Pre-requisites: Must be an Honors student
ALD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7		
ALD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**505**	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ALD	**520**	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	**525**	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**531**	Caregiving Issues for Familes and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	**535**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		
ALD	**540**	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**545**	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate students only
ALD	**560**	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**360**	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ALT	**401**	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; Credit is allowed for only ALT 401 or 501
ALT	**405**	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	**410**	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: UET 331
ALT	**420**	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: CHM 113; ALT 360
ALT	**435**	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360 and ALT 410. Students who have credit for ALT 535, may not enroll in ALT 435
ALT	**445**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 and ALT 360. Students with credit for ALT 545, may not enroll in ALT 445
ALT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
ALT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**501**	Advanced Renewable Energy: Global Hydrogen Economy	Global, comprehensive evaluation of all renewable energy sources with focus on solar cells, hydrogen, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Students who have credit for ALT 401, may not enroll in ALT 501
ALT	**502**	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**503**	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**505**	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Credit is allowed for only ALT 405 or 505
ALT	**506**	Fuel Cell Integration and Packaging	Practical overview of integration and packaging of fuel cell system, which comprises a fuel processor module, a fuel cell module.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**507**	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**515**	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**535**	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit in ALT 435, may not enroll in ALT 535
ALT	**545**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is allowed for only ALT 445 or 545
ALT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		
AME	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Pre-requisites: Must be an Honors student
AME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7		
AME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		

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AME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**590**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		
AME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		
AML	**100**	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
AML	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**330**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit is allowed for only ASB 430, CPI 430, or AML 330
AML	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**406**	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Completed at least two from the following: MAT 270, 271, 272; AND STP 226 (or 231 or 420)
AML	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**493**	Honors Thesis		Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**497**	Honors Colloquium		Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
AML	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**610**	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**611**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**612**	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AML	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**301**	Introduction to American Studies	Introduces the interdisciplinary study of American culture, emphasizing critical reading and writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**310**	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**311**	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**314**	Military Studies	Topics in the history of the American military.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

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AMS	**316**	American Religious Systems	Topics in American religion; may include Hispanic missions of the Southwest. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**320**	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
AMS	**321**	American Cultural History II	Second of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**322**	Studies in American Literature	Topics in American literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**323**	Studies in American Art and Architecture	Topics in the visual arts and material culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**326**	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**327**	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**330**	Introduction to American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
AMS	**332**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**334**	The American Class System	Studies in social classes and their function within American society. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**335**	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**342**	Writing about American Culture	Teaches methods of writing cultural criticism, emphasizing the essay form.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**344**	Creative Writing	Emphasizes the study and practice of creative nonfiction. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**345**	Reporting	Fundamentals of news gathering, interviewing, and in-depth reporting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**346**	Editing	Theory and practice of editing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**351**	Technical Writing	Computer-based instruction in writing documents for online, oral, and print formats, focusing on audience-centered rhetoric.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**412**	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**414**	Military Studies	Topics in the history of the American military. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**417**	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**422**	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**428**	Chicano Cultures in the Southwest	Examines and explores Chicana and Chicano culture as place and sentiment. The physical place and space and the sentiment related to Chicanas and Chicanos.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
AMS	**429**	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**431**	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	**432**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**490**	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
AMS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
AMS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
AMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMT	**100**	Flight Operations and Safety I	Supervised private pilot flight training and flight safety briefings and recurrent aviation subjects appropriate for private pilots. Requires continuous enrollment until completion of FAA Private Pilot Certificate. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND must have C or greater in AMT 182 and AMT 220 OR Corequisite: AMT220 and AMT182
AMT	**101**	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**182**	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**200**	Flight Operations and Safety II	Supervised commercial instrument flight training, safety briefings, and recurrent aviation subjects as appropriate for commercial and instrument pilots. Requires continuous enrollment until completion of FAA Commercial Pilot Certificate with Instrument Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 100 with a C or better.
AMT	**201**	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) OR Aero Mgmt Tech (AWS Mgmt) OR Air Traffic Management student
AMT	**214**	Commercial/Instrument Ground School I	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT182, AMT220 and AMT101 with C or better
AMT	**220**	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**280**	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned a D or better in PHY 111, and PHY 113

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	**287**	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned D or greater or currently enrolled in PHY 111 or PHY 121 OR Corequisite: PHY111 or PHY121
AMT	**300**	Flight Operations and Safety III	Supervised instructor flight training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of FAA Flight Instructor Certificate with Instrument Instructor Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 100 with a C or better.
AMT	**308**	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisite: Total earned hours must be greater than or equal to 50
AMT	**322**	Commercial/Instrument Ground School II	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater or currently enrolled in AMT100, AMT182 and AMT214
AMT	**350**	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements. fee	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a C or greater in AMT280 and AMT287 or be currently enrolled OR Corequisites: AMT287
AMT	**370**	Air Freight Operations	Air freight operations in National Aviation System; ramp operations, loading, weight and balance, and administration of airside and groundside operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**382**	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater in AMT200 or AMT322 or be currently enrolled
AMT	**385**	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**387**	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 200 with a C or better.
AMT	**391**	Multiengine Instructor Ground School	Ground school preparation for the FAA Multiengine Flight Instructor Rating. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisite: Technology Science BS student
AMT	**392**	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must be Technology Science BS student AND earned C or greater or currently enrolled in AMT 200 and AMT 385
AMT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**396**	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisite: Technology Science BS or BAS student; Minimum 50 hours
AMT	**400**	Flight Operations and Safety IV	Multiengine and crew training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of multiengine rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 300 with a C or better.
AMT	**401**	Multiengine Instructor Rating	Normal and emergency flight operations. Instruction techniques and procedures for light multiengine land, airplane. CFIAME Rating required for course completion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**408**	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must have a C or greater in AMT 308 or be currently enrolled
AMT	**410**	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**412**	Air Transportation Research	Surveys practical research methodology in use in the air transportation industry. Topics include planning and design considerations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**442**	Aviation Law/Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**444**	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum Junior standing
AMT	**482**	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT200 or 322 with a C or better; AMT 382 with a C or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
AMT	**486**	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT300, AMT382 and AMT 482 with C or better
AMT	**488**	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT 300, AMT 382 and AMT 482 with C or better
AMT	**489**	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic level must equal Junior or greater AND must have a C or greater in AMT 308 or be currently enrolled
AMT	**490**	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Aero Mngt Tech (Prof Flight) student; AMT 300, 400, 382, 482, 486 and 488 with C or better
AMT	**491**	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic Level greater than or equal to Senior
AMT	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Prerequisite: University Cumulative GPA is greater than or equal to 2.25
AMT	**496**	Airline Aircraft Systems Capstone	Commercial airline aircraft systems and flight procedures. Includes theoretical education for large, commercial passenger aircraft.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
AMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
AMT	**520**	Airline Pricing and Yield Management	Airline economics at the operating level; historical and current operational strategies; demand, traffic, price, yield, revenues, and costs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**521**	Air Transportation Regulation	Reviews evolutionary history of government regulations. Explores alternatives for economic, safety, social, and administrative regulatory reform in air transportation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**522**	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**523**	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**524**	Airport Management and Operations	Overview of planning, funding, and development of airport facilities; legal and ethical considerations associated with airport management operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**525**	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**526**	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**527**	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**528**	International Aviation	Major issues of international aviation, historical review of institutional framework. Bilateral route agreements, freedom versus sovereignty, current legal and political arrangements.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater

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AMT	**529**	Fixed-Base Operations Management	Examines FBO role in the national aviation system. Organization of flight line operations, aircraft maintenance, and administration for multiple aircraft types.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**532**	Managing Diversity in Aviation	Examines group identity and cognitive styles, cross-cultural issues, language and diversity, and effects of aviation culture on management of diversity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**541**	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**542**	Human Factors in Automation	Examines human factors issues associated with automation. Includes impact of automation design, workload, stress, and system complexity on human operators.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**545**	Human Factors in Aviation	Overview of human role in aviation. Issues, problems of unsafe acts and attitudes in human behavior. Human engineering capabilities and limitations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**546**	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**549**	Applied Human Factors Research	Aviation human factors research principles applied and tested in operational settings. Group projects assigned in conjunction with industry partners.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
ANB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
ANB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANB	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**475**	Computer Programming in Architecture	Computer programming for architectural problems and applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ANP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ANP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ANP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ANP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	**530**	Computer Graphics in Architecture	Fundamentals of computer graphics programming in architecture, including graphics hardware, device-independent packages, 2- and 3-D transformations, and data structures.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be MS Building Design Knowledge and Computing student
ANP	**561**	Architectural Information Processing Systems	Applies information processing systems to architectural problems. Analyzes computing tools with respect to assumptions and theories.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bld Design (Knowledge/Compng) MS student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANP	**563**	Methods in Architectural Design Computation	Concepts and models for research in computer-aided architectural design with an emphasis on computational methods and a system framework.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Bld Design (Knowledge/Compng) MS student
ANP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
ANP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	**681**	Project Development	Defines and elaborates on major ideas for implementation in ADE 622 in relation to contemporary theory and practice.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ANP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**200**	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
APA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**315**	Asian Pacific American Literature	Explores the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**330**	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**340**	Asian Pacific Americans and Media	Analyzes social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C & H	
APA	**360**	Asian Pacific American Experience	Historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**450**	Asian Pacific American Contemporary Issues	Focus on issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
APA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
APH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**300**	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	**305**	Contemporary Architecture	Europe and America from the foundations of the modern movement to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Non-majors only (non-architecture students)
APH	**313**	History of Architecture I	Surveys the monuments, buildings, and cities of Europe and Africa from the earliest human settlements to the present day.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisite: Juniors and Seniors only
APH	**314**	History of Architecture II	Surveys the monuments, buildings, and cities of Asia and the Americas from the earliest human settlements to the present day.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisites: APH 313 with a C or better
APH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**411**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
APH	**414**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & H	
APH	**421**	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L or HU	Pre-requisites: Architecture student; APH 313 and APH 314 with C or better
APH	**441**	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**446**	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**447**	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	

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APH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
APH	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
APH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
APH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**505**	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	**509**	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	**511**	Energy Environment Theory	Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Architecture, Master of Urban Design or Building Design MS student
APH	**515**	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**581**	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**588**	Spanish Language Acquisition		N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
APL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
APL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**601**	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
APL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
APM	**501**	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**502**	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	**503**	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzela Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p-spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**504**	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**505**	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**506**	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**520**	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**521**	Numerical Analysis for Ordinary Differential Equations	Stability, accuracy, consistency, RK methods, finite differences, linear partial differential equations, dispersion, dissipation, method of lines. Applications and programming. Students should have had a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**522**	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**523**	Optimization	Linear programming, unconstrained nonlinear minimization, line search algorithms, conjugate gradients, quasi-Newton methods, constrained nonlinear optimization, gradient projection, and penalty methods. Completion of courses in Applied Linear Algebra and Computational Methods is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**524**	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**525**	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**526**	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**530**	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**531**	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	**532**	Mathematical Neuroscience II	Mathematical modeling of systems neuroscience. Network dynamics, coupled phase oscillators, central pattern generators, neural coding, learning and memory. Students should have taken ordinary differential equations or mathematical cell physiology or mathematical neuroscience prior to enrolling in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**533**	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**534**	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**535**	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**541**	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**553**	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**560**	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**561**	Nonlinear Analysis of PDEs in Fluids	Sobolev spaces; incompressible Euler and Navier-Stokes equations; weak and strong solutions; attractors and the connection with turbulence; geophysical applications. Completion of a course in Differential Equations II is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**570**	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**575**	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	**576**	Theory of Partial Differential Equations	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**577**	Theory of Partial Differential Equations	Continuation of APM 576. Completion of a course in the Theory of Partial Differential Equations is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**581**	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**582**	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
APM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
APM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
APM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
AR	**461**	Adv Ceramics I		Y	LEC	Y	CNV	Herberger College of the Arts	School of Art	3.		
ARA	**110**	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1.		
ARA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**195**	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARA	**202**	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**311**	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Non-ART student; ENG 101; ENG 102; Minimum Junior standing
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	**488**	Understanding Art	Understanding art as an emergent cultural phenomenon with an emphasis on a critical examination of conceptual issues in art. Writing required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L or HU	Pre-requisites: ARS 101; ARS 102
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARB	**101**	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**102**	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**201**	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**202**	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**311**	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**321**	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**331**	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**335**	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	**341**	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**351**	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**411**	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**421**	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
ARB	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ARB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ARB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	**250**	Teaching Inquiry in Art	Using inquiry to investigate artwork and to teach others to make and understand art. Introduces viewpoints for art understanding.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**301**	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARE	**370**	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with C or better
ARE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**440**	Disciplines of Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Must be an Art student. Completed ARE 250 with a B- or better
ARE	**482**	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Fine Arts Art student
ARE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**486**	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 482 with C or better
ARE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARE	**493**	Honors Thesis		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**496**	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with B- or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	**510**	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**520**	Issues in Teaching Inquiry in Art	Issues in teaching and learning through inquiry about artworks using print and electronic reproductions and information.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**525**	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**530**	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**535**	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**540**	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**610**	Issues and Trends in Art Education	Doctoral-level investigation of historical and contemporary issues related to teaching and research in art education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**611**	Curriculum Development in Art Education	Doctoral-level inquiry into the philosophical, psychological, and sociological foundations of curriculum development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**451**	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ARP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ARP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Architecture student
ARS	**100**	Introduction to Art	Understanding of art and its relationship to everyday life through painting, sculpture, architecture, and design. No credit for Art majors or non-Art majors who have completed ARS 101 or 102 or 300.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 101, 102, or ARS 300 may not enroll in ARS 100
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**201**	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**250**	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**300**	Introduction to Art	Course content same as ARS 100 but requires a higher level of accomplishment and comprehension. No credit for Art majors or non-Art majors who have completed ARS 100. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 100 may not enroll in ARS 300
ARS	**302**	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	Pre-requisite: ENG 102, 105, or 108

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ARS	**310**	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**340**	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**362**	Pre-Columbian Art I	Architecture, sculpture, ceramics, painting, and other arts of Mesoamerica before European contact. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**365**	Native North American Art	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**400**	History of Printmaking	History of the print as an art form and its relation to other modes and forms of artistic expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**402**	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**404**	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**406**	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**410**	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**412**	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**414**	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better; Students who have credit for ARS 514, may not enroll in ARS 414
ARS	**416**	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**417**	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 417 or 517
ARS	**418**	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**422**	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**424**	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**426**	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**428**	Art of the 18th Century	History of painting, sculpture, architecture, graphic arts, and the decorative arts from 1700 to the French Revolution (1789).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 428 or 528
ARS	**430**	Art of Spain and its Colonies	Architecture, painting, and sculpture from 1500 to 1800. Colonial focus on central Mexico and the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 430 or 530
ARS	**432**	19th-Century French Art and Culture	History of painting, graphic arts, sculpture, and architecture, 1800 to 1900 in France in its political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**434**	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 534, may not enroll in ARS 434
ARS	**435**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ARS	**436**	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**437**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ARS	**438**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisite: ARS 102 with C or better
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better
ARS	**442**	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**451**	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		

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ARS	**458**	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**459**	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 458
ARS	**460**	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 439
ARS	**466**	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	
ARS	**468**	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**469**	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art hIstory requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**472**	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**473**	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**475**	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 475 or 575
ARS	**480**	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**485**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 585, may not enroll in ARS 485
ARS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	**501**	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**502**	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**504**	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:Must be a Graduate Student
ARS	**506**	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**514**	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or Post Bacc Undergraduate or a Graduate Student; Students who have credit for ARS 414, may not enroll in ARS 514
ARS	**516**	Critical Approaches to Gothic Art	Architecture, sculpture, painting, and the minor arts in western Europe, ca. 1150-1350, considered within religious, social, and economic contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**517**	Critical Approaches to Late Gothic Art	Art of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts. Requires research or reading project.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 417 or 517
ARS	**522**	Sixteenth-Century Italian Art	Critical study of painting, sculpture, and architecture in 16th·century Italy in its religious and historical context.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARS	**528**	Eighteenth-Century Art in Europe	Critical study of European art from the late Baroque to the early years of Neoclassicism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 428 or 528
ARS	**530**	Art of Spain and New Spain	Critical study of architecture, painting, and sculpture from 1500 to 1800.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 430 or 530
ARS	**532**	Art, Politics, and Patronage, 1770-1850	Critical analyses of political events in Europe. Examines issues of patronage, art as propaganda. Impact of war and revolution on visual arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**534**	Studies in Modern European Art, 1850-1914	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours must be greater than or equal to 108; Must be a Senior or a Post Bacc Undergraduate or be a Graduate Student. Students who have credit for ARS 434, may not enroll in ARS 534
ARS	**542**	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**562**	Art of Ancient Mesoamerica	Critical study of art and architecture of Mexico and Maya areas before Spanish contact.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**565**	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**574**	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**575**	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 475 or 575
ARS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**585**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Students who have credit for ARS 485, may not enroll in ARS 585
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**438-W**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**453**	Experimental Printmaking	Alternative techniques and methods to traditional approaches to printmaking. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger College of the Arts	School of Art	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**111**	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**112**	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**113**	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**115**	3-D Design	Fundamentals of 3-D form. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**201**	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Co-requisite: ART 202
ART	**202**	Photography I Lab	Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0.		Co-requisite: ART 201
ART	**204**	Photography II	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisites: Art Undergraduate student; ART 101 or ART 201 with C or better
ART	**211**	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**214**	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. Lab. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**223**	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**227**	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**231**	Sculpture I	Explores sculptural forms through concepts related to basic materials. Focus on studio production, safety, aesthetic criticism, and history of sculpture. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art students; ART 111 and ART 115 with C or better; Pre- or Corequisite: ARA 110 (with C or better if completed)
ART	**253**	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:Art undergraduate student; ART 113 with C or better
ART	**261**	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 112 and ART 115 with C or better
ART	**272**	Metalworking I: Introduction	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming. Not open to seniors. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**274**	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**276**	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, feltmaking, dyeing, block printing, plaiting, 3-D structures. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**301**	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art major with completed portfolio; ART 204 with C or better
ART	**304**	Advanced Photography	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**305**	Color Photography I	Applies color transparencies and prints to photographic art. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art students; Must have completed the portfolio milestone (if required); ART 204 and ART 101 or ART 201 with a C or better
ART	**308**	Digital Photographic Images I	Scanning, manipulation, refinement, and compositing of photographic images on the computer. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**311**	Drawing III	Emphasizes composition, exploration of drawing media. 6 hours a week. Requires acceptance into the appropriate professional program or instructor approval. Contact your academic advisor in the School of Art for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 with C or better
ART	**314**	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student or completion of portfolio milestone; ART 214 with C or better
ART	**323**	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio; ART 223 with C or better
ART	**325**	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 214 and ART 323 with C or better
ART	**327**	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 227 with C or better
ART	**331**	Sculpture II	Continuation of ART 231 with an emphasis on metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student with portfolio completed; Pre- or Co-requisite: ARA 110 (with C or better if completed)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**332**	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must have a C or greater in ART231 AND ART331 AND be an ART student
ART	**333**	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must have a C or greater in ART231, ART331 and ART332 or be currently enrolled in ART332 and must be an Art student
ART	**345**	Visualization and Prototyping I	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Digital Art OR Intermedia student
ART	**346**	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequistes: Must be an ART student
ART	**348**	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must have a C or greater in ART346 or be currently enrolled in ART346 AND be an ART student
ART	**351**	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. Studio 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): ART 253 with C or better
ART	**352**	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**354**	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must have a C or greater in ART253 AND be an ART student
ART	**355**	Printmaking as Photography	Introduces photographic principles and skills for photomechanical printmaking processes, including photosilkscreen, photolitho, and photoetching. 6 hours a week. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**360**	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application. 6 hours a week. May be repeated once for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 with C or better
ART	**363**	Ceramic Clay-Glaze		N	LEC	N	CNV	Herberger Inst Design & Arts	School of Art	3.		
ART	**364**	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 with C or better
ART	**365**	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**372**	Metalworking II	Metal fabrication techniques including surface embellishment. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**373**	Metalworking III	Compression, die, and stretch forming as applied to hollow form construction. Hot and cold forging techniques as applied to smithing. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**374**	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 with C or better
ART	**376**	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**377**	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**403**	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**404**	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**406**	Photo Techniques	Camera and darkroom techniques with emphasis on creative control of the black and white print. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student and you must have a C or greater in ART204 AND ART101 or ART201
ART	**407**	View Camera	View camera and darkroom techniques. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student; ART204 and (ART101 or ART201) with C or better
ART	**408**	Digital Photographic Images II	Develops personal aesthetic in digital photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:ART 308 with a grade of D or better
ART	**409**	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**410**	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**411**	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 and ART 311 with C or better
ART	**414**	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ART 314

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ART	**415**	Art Anatomy	Study of human anatomical structures as applied to the practice of figure-oriented art. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	4.		Prerequsites: Art student; ART 214 with C or better
ART	**423**	Painting III	May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223 and ART 323 with C or better
ART	**425**	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223, ART 323 and ART 314 with C or better
ART	**427**	Advanced Watermedia	Continuation of ART 327. Advanced techniques, concepts, and methods with watercolor and other water-based media on paper. 6 hours a week. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**431**	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and 332 with C or better
ART	**432**	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**435**	Foundry Research Methods	Research in foundry techniques.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**436**	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and ART 332 with C or better
ART	**437**	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**438**	Experimental Systems in Sculpture	Simple electrical and mechanical systems that can be utilized in the context of studio art and installations. Requires active production of studio artworks. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**439**	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**440**	New Media Concepts	Continued experiments with new media and interdisciplinary concerns in art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Corequisite(s): ART 441
ART	**441**	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1.		Pre-requisite: Art portfolio completed; Co-requiste ART 440
ART	**442**	Folk/Outsider Art	Explores ideas, attitudes, and art of contemporary self-taught, visionary, and outsider artists. Research and studio practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**443**	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: Art student
ART	**449**	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346 and ART 348 with C or better
ART	**450**	Computer Animation and Audio	Integrates audio with 3-D animation for fine arts applications. Includes compositing and effects. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346, ART 348 and ART 449 with C or better
ART	**451**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 351 with C or better or currently enrolled
ART	**452**	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 352 with C or better
ART	**454**	Advanced Screen Printing	Continuation of ART 354. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 354 with C or better
ART	**455**	Advanced Photo Processes for Printmaking	Continued study of photomechanical techniques and applications to printmaking or photographic processes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 355 with C or better
ART	**456**	Fine Printing and Bookmaking I	Letterpress printing and typography as fine art. Study of history, alphabets, mechanics of hand typesetting, presswork, and various forms of printed matter. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**457**	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 456 with C or better
ART	**458**	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**459**	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student or Completed the portfolio milestone; ART 253 with C or better
ART	**460**	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Art student AND you must have a C or greater in ART261 AND ART360 AND ART364(or be currently enrolled in ART360 & ART364) AND
ART	**463**	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 and ART460 with C or better

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ART	**466**	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**470**	Computer Animation Portfolio	Production of videotape and CD 3-D animation portfolios for fine arts and industry integrating animation, video, and audio. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequsites: You must be an ART student AND you must have a C or greater in ART346 AND ART348 AND ART449(or be currently enrolled in ART348& ART449) AND
ART	**472**	Metalworking IV	Forging, forming, and surface metalworking techniques with a focus on personal statements and craftmanship. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 372 with C or better
ART	**473**	Metalworking: Special Problems	Special problems in metalworking related to techniques and individual directions. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 373 with C or better
ART	**474**	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 and ART 374 with C or better
ART	**476**	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 376 with C or better
ART	**477**	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 377 with C or better
ART	**478**	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	**479**	3-D Fibers	Explores traditional and nontraditional 3-D fiber techniques and media. Discussion, research, and critiques augment technical demonstrations. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisite: Art student
ART	**492**	Honors Directed Study		N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ART	**493**	Honors Thesis		N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequsites: You must be an Honors student
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requsite: Art student
ART	**530**	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**540**	Digital Motion Studies	Fine arts digital motion studies using computer animation and video. Studio. Fee. Prerequisite: ART 346 or instructor approval. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**551**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisites: Your total Earned Hours must be greater than or equal to 108 AND Academic Level must be Senior or Post Bac Undergrad OR you must be a Non Degree Grad or in any Grad program
ART	**582**	Art Research	Independent study research using classroom facilities and supplies.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**621**	Studio Problems	Advanced study. 6 hours a week each section. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ART	**682**	MFA Exhibition Research	MFA exhibition practicum using classroom facilities and supplies. Can be used in place of ART 680.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AS	**150**	Animal Husbandry		Y	LEC	Y	CNV	Ira A. Fulton Engineering	W. P. Carey School of Business	3.		
ASB	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**101**	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
ASB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: Students who have credit for SSH 200, may not enroll in ASB 200. Must have ENG 101, 105, 107, or ENG 111.
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**210**	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**223**	Buried Civilizations of the Americas	Archaeology through examination of several ancient civilizations of Meso-, South, and North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**230**	Beginning Culture Theory	Bridges ASB 102 and upper-division courses; introduces cultural theory and fosters independent thinking, critical analysis, communication, and adaptability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**231**	Arch Field Methods	Excavation of archaeological sites and recording and interpretation of data. Includes local field experience.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**252**	Anthropology of Sports	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASB	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit in SSH 301, you may not enroll in ASB 301
ASB	**302**	Ethnographic Field Study in Mexico	Fieldwork study of cultural adaptation, Mexican culture, United States-Mexican cultural conflict, ethnographic research methods, and local culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**310**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**314**	Comparative Religion	Origins, elements, forms, and symbolism of religion; a comparative survey of religious beliefs and ceremonies; the place of religion in the total culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**320**	Indians of Arizona	Traditional cultures and the development and nature of contemporary political, economic, and educational conditions among Arizona Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & H & C	
ASB	**322**	Peoples of Mesoamerica	Indigenous, mestizo, and national cultures, rural and urban peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**324**	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**325**	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**326**	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**327**	Action Anthropology	Explores contemporary issues and problem solving in Cuna, Micronesia, Mayan, and U.S. Latino communities, through applied anthropology and community initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**330**	Principles of Archaeology	Methods and theories for reconstructing and explaining the lifeways of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ASB 222 or ASB 223, with a grade of D or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**337**	Pre-Hispanic Civilization of Middle America	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**338**	Archaeology of North America	Origin, spread, and development of the prehistoric Indians of North America up to the historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**344**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU	
ASB	**351**	Psychological Anthropology	Approaches to the interrelations between the personality system and the sociocultural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	
ASB	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	**361**	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**362**	The Neolithic Revolution and its Consequences	Surveys models for the appearance of food production in the Old World, and its consequences for emergent social complexity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**368**	Prehistoric and Historic Hunter-Gatherers	Studies known hunting and gathering societies with the goal of developing approaches to understanding past hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**400**	Cultural Factors in International Business	Anthropological perspectives on international business relations; applied principles of cross-cultural communication and management; regional approaches to culture and business.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**402**	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**412**	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**416**	Economic Anthropology	Economic behavior and the economy in preindustrial societies; description and classification of exchange systems; relations among production, exchange systems, and other societal subsystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**417**	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit for only AML 330, CPI 430, or ASB 430
ASB	**443**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for SSH 403, you may not enroll in ASB 443
ASB	**452**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better, or currently enrolled. If you have credit for SSH 402, you may not sign up for ASB 452
ASB	**455**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

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ASB	**462**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
ASB	**463**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**464**	The Ethnography of Mexican Border Rural Settings	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**471**	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**480**	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**481**	Language and Culture	Applies linguistic theories and findings to nonlinguistic aspects of culture; language change; psycholinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**483**	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	**485**	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**489**	Doing Research in Anthropology	Research process learned through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing Rotating topics. May be repeated for credit.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**501**	Applied Medical Anthropology	Overview of anthropology's applications in medicine and its adaptations to U.S. ethnic populations. Requires research project in medical setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**502**	Health of Ethnic Minorities	Prevalence of illness, risk factors, health ecology, and medical and indigenous treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**504**	Ethnic Relations	Structural processes of intergroup relations, methods for investigating psychocultural dimensions of ethnicity with focus upon U.S. ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**506**	Gender, Emotions, and Culture	Relationships among gender and emotion across cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**525**	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**529**	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**530**	Ecological Anthropology	Relations among the population dynamics, social organization, culture, and environment of human populations, with special emphasis on hunter-gatherers and extensive agriculturalists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**531**	Anthropology of Development	Theories of development and the human and environmental consequences of development, with particular emphasis on rural Southeast Asia.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**532**	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**533**	Sustainable Urban Dynamics.	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites:If fyou have received credit for SOS 532, you may not enroll in ASB 533. Graduate students only
ASB	**536**	Ethnohistory of Mesoamerica	Indigenous societies of southern Mexico and Guatemala at Spanish contact and their postconquest transformation. Emphasis on the Aztec Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**537**	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**540**	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**541**	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**542**	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**543**	Method and Theory of Archaeology II	Covers concepts of social complexity along with economy, demography, and social dynamics, followed by archaeological research design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**544**	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**546**	Pleistocene Prehistory	Development of society and culture in the Old World during the Pleistocene epoch, emphasizing technological change through time and the relationship of people to their environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**547**	Issues in Old World Domestication Economies	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**549**	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**550**	Economic Archaeology	Prehistoric economies in hunter-gatherer, tribal, and complex societies. Covers subsistence strategies, craft production and specialization, and exchange.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**551**	Prehistoric Diet	Critical review of techniques for recovering dietary information and theoretical models concerned with explaining diet and nutrition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**555**	Complex Societies	Examines structural variations in hierarchically organized societies, along with origins, dynamics, and collapse.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**558**	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**559**	Archaeology and the Ideational Realm	Postprocessual and other views concerning relevance of mental phenomena for understanding sociocultural change. Various approaches to inferring prehistoric meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**560**	Archaeology of the Social Realm.	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**563**	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**567**	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**568**	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**570**	Immigration to the U.S.	Covers some of the major topics and issues in immigration studies with a focus on the United States. Uses both theoretical works dealing with the causes and consequences of international migration and ethnographic accounts of actual immigrant lives. Broadly interdisciplinary and incorporates perspectives from sociology, political science, economics, and other fields; emphasizes anthropological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**571**	Museum Principles	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**572**	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**573**	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**574**	Exhibition Planning and Design	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**575**	Computers and Museums	Basics of museum computer application; hardware and software; fundamentals of database management; issues of research, collections management, and administration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**576**	Museum Interpretation	Processes of planning, implementing, documenting, and evaluating educational programs in museums for varied audience--children, adults, and special interest groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**577**	Principles of Conservation	Preservation of museum objects: nature of materials, environmental controls, and causes of degradation; recognizing problems, damage, and solutions; proper care of objects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**579**	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(HU or SB) & G	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
ASB	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
ASB	**340**	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic, and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**346**	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
ASB	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**440**	Women in the Global Factory	Examines the impact of Third World women's incorporation into the new global division of labor in the late 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**441**	Sexuality and Culture	Uses a global, comparative approach to examine the cultural and historical construction of sexualities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**442**	Urban Anthropology	Issues in understanding urban culture and social space from interdisciplinary anthropological perspective. May involve fieldwork. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-4	(HU or SB) & G	
ASC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**301**	Contextual Uses of Algebra in Technology	Uses algebra to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: Polytechnic BAS student
ASC	**302**	Contextual Uses of Geometry in Technology	Uses geometrical concepts to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**303**	Contextual Uses of Trigonometry in Technology	Topics for close examination in selected dramatic and/or nondramatic works. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**315**	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	
ASC	**325**	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ASC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Polytechnic BAS student
ASE	**549**	Stat Applicatns Engr		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Arizona State University	3.		
ASE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
ASE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
ASE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
ASE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASM	**104**	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SB or SG	
ASM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	**246**	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**275**	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	

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ASM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASM	**301**	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites:ASM 104 with a grade of D or better
ASM	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASB 222
ASM	**338**	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		
ASM	**341**	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104
ASM	**342**	Human Biological Variation	Evolutionary interpretations of biological variation in living human populations, with emphasis on anthropological genetics and adaptation. Nutrition and disease and their relation to genetics and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASM	**344**	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	H	Pre-requisites:ASM 104 with a grade of D or better
ASM	**345**	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104, or BIO 100, or BIO 187, or BIO 188, with a D or better
ASM	**348**	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**365**	Laboratory Methods in Archaeology	Techniques of artifact analysis. Basic archaeological research techniques; methods of report writing. May be repeated for credit for total of 8 hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104 with a D or better
ASM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 (or SSH 100) and ASM 104 with a D or better
ASM	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for SSH 414, or SOS 414, may not enroll in ASM 414; Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
ASM	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in SOS 424 or BIO 424, may not enroll in ASM 424
ASM	**435**	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**443**	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; 56 hours or more
ASM	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
ASM	**448**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with a grade of D or better
ASM	**450**	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 104
ASM	**452**	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	**454**	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ASM	**455**	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisite: ASM 343
ASM	**456**	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 345

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ASM	**459**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 341 and 275 with a D or better. Students who have credit for ASM 559, may not enroll in ASM 459
ASM	**460**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	**465**	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	
ASM	**472**	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASM	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**525**	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**530**	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**543**	Primatology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**548**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**552**	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate students only. Students who have credit for ASM 452, may not enroll in ASM 552
ASM	**555**	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	**559**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 459 or 559
ASM	**560**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**565**	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASM	**566**	Advanced Topics in Quantitative Archaeology	Archaeological issues associated with quantitative analysis, e.g., Bayesian and Monte Carlo approaches, simulation, diversity. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 565 with a D or better. Graduate student only
ASM	**568**	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**573**	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**611**	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ASM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
AST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**321**	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**322**	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	Pre-requisites: MAT 270 (or MAT 265), PHY 150 (or PHY 121/122) with C or better
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**421**	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**422**	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**492**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Pre-requisites: Must be an Honors student
AST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**521**	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**522**	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**523**	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**531**	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**532-M**	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**533**	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**591-M**	Seminar		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre- or Co-requisites: AST 112 or AST 322 (with or better if completed)
AST	**301**	Discovering the Sun and Its Planets	Comprehensive course in astronomy for non-science majors. Course will include lectures, written assignments, and hands-on work. Not open to students with credit in AST 111 (available at the Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**302**	Modern Astronomy	Comprehensive course in astronomy for non-science majors. Covers achievements and controversies of 20th century astronomy through lectures, written assignments, and hands-on work. Not open to students with credit in AST 112 (available at Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
ASU	**101-CPP**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Public Programs	College of Public Programs	1.		Pre-requisite: College of Public Programs student
ASU	**101-CTI**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Tech & Innovation	Dean, College of Technology and Innovation	1.		Prerequisite(s): College of Technology and Innovation student
ASU	**101-CS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Cronkite School of Journalism and Mass Communication student
ASU	**101-HDA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		Pre-requisite: Herberger Institute of Design and the Arts student
ASU	**101-FSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisite: Fulton School of Engineering student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	**101-LA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1.		Pre-requisite: College of Liberal Arts & Sciences student
ASU	**101-TE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Teacher Education and Leadership student
ASU	**101-NCIAS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: New College of Interdisciplinary Arts & Sciences student
ASU	**101-NU**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing & Healthcare Innovation students only
ASU	**101-SOS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1.		Pre-requisite: School of Sustainability student
ASU	**101-UC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1.		Pre-requisite: University College student
ASU	**101-WPC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1.		Pre-requisite: W.P.Carey student
ATC	**230**	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ATC	**331**	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATC	**332**	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**333**	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**431**	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: ATC 331 with C or better
ATC	**432**	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ATC	**433**	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Completed ATC 333 with C or better
ATC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ATE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**361**	Building Structures I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisite: ADE 321
ATE	**362**	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 361 with C or better
ATE	**451**	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 421
ATE	**452**	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ATE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**521**	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**550**	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**553**	Building Systems III	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisite: ADE 521; ATE 563

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATE	**556**	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 522 and APH 505
ATE	**557**	Construction Documents	Production of architectural working drawings; legal status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**560**	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**562**	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**563**	Building Structures III	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ATE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**582**	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

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AVC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**301**	Architectural Communication	Communication skills for architecture studios. Emphasis on graphics, drawing conventions, media, computer-aided design, design of presentations, and oral presentations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		
AVC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AVC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AVC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AVC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AVC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**461**	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms. Credit is allowed for only BCH 461 or 361.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; Co-requisites: CHM 341 or CHM 346 (with C or better if completed)
BCH	**462**	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: BCH 461 with C or better
BCH	**463**	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 341 or CHM 346 with C or better
BCH	**464**	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre-or Co-requisites: BCH 463 and BCH 467 (with a grade of C or better if completed)
BCH	**465**	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 462 with a C or better
BCH	**467**	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
BCH	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		
BCH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
BCH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
BCH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**501**	Current Topics in Biochemistry	May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
BCH	**561**	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		

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BCH	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**568**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 353 (or LSC 353) with C or better; CHM 231 or CHM 234 or CHM 334 with C or better; Credit is allowed for only BCH 361 or 461 (or LSC 366)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCS	**101**	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
BCS	**102**	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 101 with a grade of D or better, or currently enrolled
BCS	**201**	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 102 with a grade of D or better, or currently enrolled
BCS	**202**	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 202 with a grade of D or better or currently enrolled
BCS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	**495**	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
BDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
BDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**701**	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Graduate College	Graduate College	9.		
BDE	**702**	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**721**	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**722**	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**751**	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Graduate College	Graduate College	1.		
BDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		
BDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Graduate College	Graduate College	1-15		
BE	**333**	Issues in Teaching		Y	LEC	Y	CNV	Institute & Grad Sch Education	Dean, W.P. Carey School of Business	3.		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**187**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**188**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites:with a C or better:BIO 187 (or MBB 245, or both PLB 200 and PLB 201) and BIO 188(or MBB 247)

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BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 480 with C or better
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**187**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**188**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**188**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**189**	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
BIO	**193**	The Nature of Biological Science	Creative and critical thinking skills in biological research; nature of biological knowledge; role of experimentation, predictions, hypotheses, theories, values. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:BIO 201 with a grade of D or better
BIO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**301**	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. Fee.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	**302**	Cancer and Heart Disease	Incidence and mortality statistics for cancer and heart disease; host and environmental risk factors; diagnosis, treatment and prevention strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with a C or better
BIO	**303**	Radiation and Life	Benefits and risks of radiation exposure in society; medical applications, food irradiation, nuclear power, solar UV, population health effects. Cannot be counted toward a biology major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with C or better
BIO	**304**	Radiation Medicine and Biology	Uses of radiation in medicine, including CT, diagnostic x rays, MRI, nuclear medicine, ultrasound; biological effects of radiation with emphasis on cancer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 188 with a grade of C or better
BIO	**310**	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**311**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with a C or better: BIO 187 (or both PLB 200 and PLB 201) and BIO 188. Students with credit for HPS 340, may not enroll in BIO 311
BIO	**312**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	

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BIO	**314**	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: BS Biology and Society Concentration majors; a C or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**316**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	
BIO	**318**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
BIO	**319**	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**321**	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre/Co-requisites: BIO 320 with C or better if completed
BIO	**322**	Conservation Biology and Ecological Sustainability I	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**323**	Conservation Biology and Ecological Sustainability II	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**324**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	
BIO	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 187 or GLG 101 with C or better; If you have credit in GLG 325, you may not enroll in BIO 325
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:with a C or better:BIO 187 (or MBB 245, or both PLB 200 and PLB 201) and BIO 188(or MBB 247)
BIO	**341**	Genetic Analysis	General genetics: science of heredity and variation using critical inquiry. Not open to students with credit in BIO 340.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	5.		
BIO	**342**	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites:BIO 340 or BIO 341 with a D grade or better, or be co-enrolled in either BIO 340 or BIO 341
BIO	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: MBB 247 or BIO 340 with a C or better; Students who have credit for BIO 343, may not enroll in MBB 343
BIO	**344**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better; CHM 113 and CHM 116 with C or better
BIO	**346**	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**352**	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites:BIO 187 and BIO 188 with a C grade or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better
BIO	**361**	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**386**	General Entomology	Form, activities, and classification of insects. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a grade of C or better
BIO	**390**	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		

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BIO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**402**	Service Learning	Provides academic enrichment and mentoring to economically disadvantaged children; related to course work in biology; requires weekly reflective reading and writing.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	
BIO	**406**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: C or better in:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**410**	Techniques in Wildlife Conservation Biology	Field and analytical techniques used to evaluate wildlife populations, their structure, viability, and environmental impacts. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320, BIO 322, and BIO 323 with C or better
BIO	**411**	Quantitative Conservation Biology	Principles of conservation science; demography and extinction risk; practical approaches to conserving small, declining, and exploited populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320, BIO 322 and BIO 323 with "C" or better
BIO	**412**	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	**414**	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisites: BIO 314 with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**416**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
BIO	**417**	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 415 with C or better
BIO	**421**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: You may not enroll in BIO 421 if you have credit for BIO 521; must have BIO 320 with a grade of C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	**425**	Animal Ecology	Physiological and behavioral adaptations of individual animals to both abiotic and biotic environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with a grade of C or better
BIO	**426**	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	**427**	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**428**	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320 with C or better
BIO	**431**	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 187, and BIO 188 with a grade of C or better
BIO	**435**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite:BIO 331 with a grade of C or better
BIO	**436**	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 331 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit only for MBB 440 or BIO 440
BIO	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
BIO	**450**	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 351 with C or better
BIO	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**455**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**456**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better

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BIO	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: C grade or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**461**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**462**	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**464**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better; Students who have credit in PLB 440, may not enroll in BIO 464
BIO	**465**	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**466**	Neurophysiology Laboratory	Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 465 or BIO 467 (with C or better if completed)
BIO	**467**	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**469**	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 360 with C or better
BIO	**470**	Systematic Zoology	Philosophy, theory, practice of interpreting animal diversity, including species concepts, speciation, nomenclature, and evolutionary and phylogenetic classification emphasizing phylogenetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: C grade or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**472**	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 480 with C or better
BIO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**490**	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 390 with C or better
BIO	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**495**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
BIO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**502**	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**505**	Scanning Electron Microscopy	Theory, use, and methods of preparing biological materials for scanning electron microscopy. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**508**	Scientific Data Presentation	Techniques necessary for presentation of scientific data used in journal publications, grant proposals, and visual presentations. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**515**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
BIO	**516**	Foundations of Bioethics	Advanced introduction to the theoretical and normative foundations of the field of bioethics. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		

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BIO	**520**	Biology of the Desert	Factors affecting plant and animal life in the desert regions and adaptations of the organisms to these factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**521**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		You may not enroll in BIO 521 if you have credit for BIO 421
BIO	**522**	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**524**	Ecosystems	Structure and function of terrestrial and aquatic ecosystems, with emphasis on productivity, energetics, biogeochemical cycling, and systems integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**526**	Quantitative Ecology	Sampling strategies, spatial pattern analysis, species diversity, classification, and applications of multivariate techniques to ecology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**529**	Advanced Limnology	Recent literature, developments, methods, and limnological theory; field and lab application to some particular topic in limnology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**543**	Molecular Genetics	Nature and function of the gene; emphasis on the molecular basis of inheritance and gene expression in procaryotes and eucaryotes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**545**	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**547**	Techniques in Evolutionary Genetics	Practical experience in modern techniques for the study of evolution.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
BIO	**550**	Advanced Cell Biology	Applies contemporary electron microscopic and biochemical/molecular techniques for studying eukaryotic cell functions. Mechanisms of intracellular protein trafficking.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**551**	Biomembranes	Structure and function of biological membranes, emphasizing synthesis, fluidity, exocytosis, endocytosis, and cell responses to hormones and neurotransmitters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**552**	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**561**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**563**	Environmental Physiology	Physiological responses and adaptations of animals to various aspects of the physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**564**	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		

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BIO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**610**	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**611**	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: BIO 610 with D or better, or co-enrolled in BIO 610
BIO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
BIO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		

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BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**187**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
BIO	**188**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: BIO 187 with of C or greater or be currently enrolled
BIO	**300**	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG	
BIO	**301**	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. Fee.	N	PRA	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	**305**	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	Pre-requisites: Minimum Sophomore standing
BIO	**306**	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed ENG101 or ENG105 and BIO181 or BIO188 and BIO182 or BIO187 with a grade of C or greater or be currently enrolled.
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**332**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and qualification of animal behavior and interpretation of behavior within an evolutionary framework. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: BIO 331 or LSC 331 (with C or better if completed)
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better; CHM 113 and CHM 116 with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**354**	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
BIO	**443**	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a C or better

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BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**393**	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Life Sciences	1.		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**187**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**188**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**300**	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BIS in Organizational Studies student; Minimum Sophomore status; ENG 102, 105 or 108 with C or better; Credit is allowed for only BIS 300 or 394 (Introduction to Org Studies)
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**350**	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity. Prerequisites: sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & C	Pre-requisites: Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**370**	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**470**	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; BIS 370 with D or better; senior status; completion of first-year composition
BIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
BIS	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		

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BIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
BIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
BLE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**511**	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**514**	Bilingual/Multicult-Spec Educ	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**515**	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**520**	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**524**	Secondary Sheltered ESL Content Teaching	Teaching and assessing ESL adolescents in the content areas with an emphasis on integrating language acquisition principles with content learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**526**	SEI for Elementary Schools	Prepares elementary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**527**	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**528**	Social Studies for Bilingual/ESLTeachers	Provides language and instructional methodologies and assessment strategies relevant to bilingual/multicultural students in social studies content delivered in Spanish and English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**529**	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**535**	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**537**	Language Structure Aquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Credit is allowed for only BLE 537 or LIN 510
BLE	**541**	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**543**	Bilingual Education Models	Bilingual education programs in other countries; analysis of political, social, economic, and educational implications; practice in planning bilingual education curricula. See also offerings under MCE, SED, SPE, and SPF.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**561**	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Latino/a and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**510**	Foundations of Structured English Immersion	Prepares teachers for linguistically diverse classrooms, including Structured English Immersion knowledge to meet the Augmented Provisional SEI Endorsement: ELL Proficiency Standards, Assessment Objectives, Foundations of SEI and SEI strategies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**578**	Student Teaching in the Elementary School	Supervised teaching in the area of specialization. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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BLE	**220**	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
BLE	**321**	ESL Methods for Diverse Language Classrooms	Strategies and materials for second-language learning, including research on language acquisition/learning, practical applications of ESL methodologies, phonics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**322**	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**324**	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**335**	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**396**	Field Experience I	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**397**	Field Experience II		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**400**	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**407**	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**408**	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**411**	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**412**	Mathematics Curriculum, Instruction and Assesment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**413**	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**414-W**	Bilingual/ESL Curriculum and Organization	ESL curriculum content and organization, including program model effectiveness, language assessment and language usage, special needs and parent involvement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**433**	Language Arts Methods, Management, and Assessment in Elementary BLE/ESL Settings	Social nature of oral and written, first- and second-language acquisition and congruent teaching, management, assessment practices in BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**455**	Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings	Examines methods, classroom management strategies, and assessment techniques for social studies instruction in elementary BLE/ESL classes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**470**	Student Teaching Seminar	Concurrent course with the student teaching experience that provides support, content, and critical evaluation opportunities directly related to teaching practices.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**478**	Student Teaching in Diverse Language Classrooms	Student teaching in diverse language classrooms. Focuses on use of English language learning and bilingual strategies; integrates all previous course work. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**479**	Capstone Seminar in Bilingual/ESL Education	Reflective, experience-based integration of theory and practice; professional development for bilingual/ESL teachers.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**481**	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
BLE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
BLE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	**496**	Field Experience III	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
BLE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BME	**100**	Introduction to Bioengineering	Introduces profession of bioengineering: bioengineering design process, teaming, computer models in bioengineering, communications skills, career planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Bioengineering and Pre-Med Engineering student; Pre/Co-requisite: ENG 101, 105, or 107 with C or better
BME	**111**	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisite: Engineering student
BME	**112**	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisite: Engineering student
BME	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**200**	Conservation Principles in Bioengineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: CHM 114 or CHM 116 completed with C or better; PHY 131/132 with a C or better; :BIO 188(or BME 111/112) with a C or better; Co-requisite:MAT 275
BME	**202**	Global Awareness within Biomedical Engineering Design	Introduces ethical, legal, social, economic, and technical issues arising from the design and implementation of bioengineering technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L or HU	Pre-requisites: Engineering students OR have a minimum cumulative GPA of 2.50; ENG 102, 105 or 108 completed with a grade of C or greater or be currently enrolled; ECN 111 or ECN 112 AND either ECE 100, 106 or 194 completed with a grade of D or greater
BME	**235**	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering student; BIO 188 (or BME 111 and BME 112) with C or better, CHM 114 or CHM 116 with C or better; Pre/Co-requisite: PHY 131 and PHY 132.
BME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**300**	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE Junior, Senior or Post-Bac; BME 100 with C or better; ENG 102, 105 or 108 with C or better
BME	**318**	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 235 with a C or better
BME	**331**	Bioengineering Transport Phenomena	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 212, MAT 275 (or MAT 274), CHM 341, and BME 200 with C or better
BME	**350**	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BSE/BS student; EEE 202 with C or better; MAT 274 or MAT 275 with C or better; Pre/Co-requisite: MAT 343
BME	**370**	Microcomputer Applications in Bioengineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 235 with C or better; BME 350 with a C or better
BME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**411**	Biomedical Engineering I	Reviews diagnostic and prosthetic methods using engineering methodology. Introduces transport, metabolic, and autoregulatory processes in the human body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum GPA of 2.50; BME 334 with C or better

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BME	**412**	Biomedical Engineering II	Reviews electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement technology, cardiovascular and pulmonary fluid mechanics, and the application of mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum cumulative GPA of 2.50
BME	**413**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; BME 370, BME 235 with C or better
BME	**415**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.0; MAT 274 with a D or better or currently enrolled; PHY 116 or PHY 131 with a D or better or currently enrolled in PHY 131 OR Graduate Engineering student
BME	**416**	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	**417**	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.	L	Pre-requisite: BME 318; BME 331; BME 370; IEE 380; BME 300 with C or better; Pre/Co-requisite: BME 413
BME	**419**	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 350 and BME 370 with C or better
BME	**423**	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.	L	Pre-requisites: BS/BSE Engineering, pre-requisite or co-requisite:BME 413
BME	**434**	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 331 with C or better
BME	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**490**	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 417with C or better
BME	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Pre-requisites: Must be an Honors student
BME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7		Pre-requisite: Bioengineering or Pre-Med Engineering BS or BSE student
BME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**511**	Biomedical Engineering I	Diagnostic and prosthetic methods using engineering methodology. Transport, metabolic, and autoregulatory processes in the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**512**	Biomedical Engineering II	Electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement, technology, cardiovascular and pulmonary fluid mechanics, and mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**513**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**514**	Advanced Biomedical Instrumentation	Principles of applied biophysical measurements using bioelectric and radiological approach.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**515**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only

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BME	**516**	Topics in Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**518**	Introduction to Biomaterials	Topics include structure property relationships for synthetic and natural biomaterials, biocompatibility, and uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**519**	Topics in Biocontrol Systems	Linear and nonlinear control systems analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**520**	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**521**	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**522**	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**523**	Physiological Instrumentation Lab	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate Engineering students only
BME	**524**	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**525**	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Graduate Engineering students only
BME	**532**	Prosthetic and Rehabilitation Engineering	Analysis and critical assessment of design and control strategies for state-of-the-art medical devices used in rehabilitation engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**551**	Movement Biomechanics	Mechanics applied to the analysis and modeling of physiological movements. Computational modeling of muscles, tendons, joints, and the skeletal system with application to sports and rehabilitation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**566**	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy, and research. Lab experiments using diagnostic radiology, fluoroscopy, ultrasound, and CAT scanning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**568**	Medical Imaging	CT, SPECT, PET, and MRI. 3-D in vivo measurements. Instrument design, physiological modeling, clinical protocols, reconstruction algorithms, and quantitation issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		

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BME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		
BME	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		
BMI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**501**	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**502**	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**505**	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 502 with a C or better; admission to a graduate program in the School of Computing and Informatics
BMI	**511**	Decision Support and Evidence-Based Practice	Biomedical decision making and the tools and techniques for decision support, including artificial intelligence and machine learning techniques.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		
BMI	**515**	Advanced Biostatistical Methods	Understanding biomedical data; how to use statistical methods and software to correctly analyze biomedical data.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**516**	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**520**	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 505 and BMI 516 with C or better, and admission to any SCI graduate program
BMI	**540**	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**541**	Cognition and Decision Making in Healthcare	Conceptual and methodological issues in cognitive science and medical informatics, including design and use of technology in medical settings.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**555**	Medical Information Management	Database theory and information management systems with applications to biomedical domain, including use of databases in the Web context.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: CSE 412 with D or better, and admission to any SCI graduate program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	**560**	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1.		Pre-requisite: Biomedical Informatics PhD student
BMI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	GNA	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Admission to any SCI graduate program
BMI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Graduate College	Biomedical Informatics Program	1.		
BMI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-4		Pre-requisites: Admission to any SCI graduate program
BMI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-15		
BMI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Biomedical Informatics Program	1-15		
BMI	**101**	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**102**	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 101 with B or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BMI	**201**	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GRD	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**211**	Modeling Biomedical Decisions	First semester of a three-emester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**221**	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**301**	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**311**	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**312**	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**330**	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**332**	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**461**	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**462**	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	**465**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**466**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BMI	**482**	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**483**	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 482 with C or better
BMI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BMI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BUA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**300**	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	1.		
BUA	**330**	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		
BUA	**380**	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree or Graduate student.
BUA	**381**	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree or Graduate student.
BUA	**382**	Small Business Sales and Market Development	Building and maintaining customers, developing a market identity and a niche, and the importance of sales.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with min 2.00 ASU Cum GPA, OR Graduate student; must not have previously earned credit in MKT 395.
BUA	**383**	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**384**	Small Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**440**	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 441 with a C or better.
BUA	**441**	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 440 with a C or better.
BUA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Faculty of Business Administration	1-6	L	Pre-requisites: Must be an Honors student
BUA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-7		
BUA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-12		
BUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
BUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**502**	Organization and Management of Cooperative Programs	Work-study programs for business occupations in high schools and community colleges.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BUE	**480**	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**481**	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
BUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

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BUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		
BUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
BUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
CBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	**520**	Modeling and Computational Biology	Key mathematical and computational techniques for bioinformatics. Numerical and visualization software; scripting, database management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**521**	Applications and Complex Problem Solving in Computational Biology	Continuation of CBS 520. Key mathematical concepts. Team solution of bioinformatics applications, project writing, and presentation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisite: CBS 520 with B or better

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CBS	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
CBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
CCS	**300**	Chicana and Chicano Culture and Society	Intensive analysis of how Mexican American writers, artists, film makers, entertainers, and academicians have interpreted aspects of the Chicana and Chicano experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
CCS	**446**	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of Chicana and Chicano Studies content into elementary and secondary curriculum; designed for teachers who work with Chicana and Chicano students.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
CDE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
CDE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
CDE	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	Pre-requisites: Minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
CDE	**338**	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	2-4		
CDE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
CDE	**430**	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
CDE	**437**	Infant Family Assessment and Observation	Examines strategies for implementing developmental assessments and observations of young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	
CDE	**444**	Risk and Variation in Child Development	Impact that constitutional and environmental risk factors have on young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
CDE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6	L	Pre-requisites: Must be an Honors student
CDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
CDE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		
CDE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-7		
CDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		
CDE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**531**	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
CDE	**533**	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
CDE	**534**	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: CDE 531; FAS 500
CDE	**570**	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**571**	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**572**	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**573**	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**574**	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**575**	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**576**	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-IFP student
CDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		
CDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
CDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**610**	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**612**	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: CDE 531 with C or better
CDE	**634**	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Prerequisite: CDE 534
CDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-15		
CDE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	THE	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
CDE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		
CDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-15		
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
CED	**111**	Exploration of Education	Education as an instrument in the development of the individual and society, and its significance as an American institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.	SB	
CED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**250**	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
CED	**294**	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
CED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
CED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**512**	Introduction to Helping Relationships	Introduces the skills used in the helping professions and examines the settings in which they occur.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**522**	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**523**	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**525**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COE 501
CED	**527**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**528**	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**534**	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**545**	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**567**	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**577**	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling Psychology MC or PhD student
CED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**655**	Student Development Programs in Higher Education	Emerging conceptual models of student development. Overview of student personnel and student affairs programs in community colleges, four-year colleges, and universities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: must be a graduate student (non-degree or degree seeking)
CED	**672**	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	**100**	Introduction to Civil and Environmental Engineering	Introduces basics of civil and environmental engineering design, team work, ethics, communication and management skills, modeling, problem solving, computer applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		Pre-requisites: Civil Engineering students only
CEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**210**	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better
CEE	**212**	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 and MAT 275 (or MAT 274) completed with C or better
CEE	**213**	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 (or CEE 211) with C or better; MAT 274 (or MAT 275) with C or better
CEE	**281**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**300**	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	L	Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**312**	Engrg Materials		N	LEC	N	CNV	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		
CEE	**321**	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) with C or better; CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	**341**	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) and CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (C or better if completed)
CEE	**351**	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**353**	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**361**	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 213 with a C or better; CHM 114 or CHM 116 with a D or better; Pre- or Co-requisite: IEE 380 with D or better if completed
CEE	**372**	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	CS	Pre-requisites: Engineering BSE students; MAT 274 or MAT 275 & MAT 267 or MAT 272 (grade of C or better); MAT 267 or MAT 272 may be taken as a co-requisite. Credit for only CEE 384 or MAE 384
CEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**400**	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	(L or HU) & H	Pre-requisites: Civil and Environmental Engineering BS or BSE student; CEE 300 with C or better OR Non-CEE Juniors or Seniors
CEE	**412**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 412 or 511.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; completed CEE 351 and CEE 353 with a grade of C or greater
CEE	**420**	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**421**	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**423**	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	**432**	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	**440**	Engineering Hydrology	Descriptive hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 341 with a grade of C or greater
CEE	**441**	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better

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CEE	**452**	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 with C or better
CEE	**462**	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	**466**	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	**467**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 467 or 567. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or MIC 220 with a grade of C or greater
CEE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or CHE 334 with a C or greater
CEE	**474**	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	**475**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	**481**	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better
CEE	**483**	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control. Credit is allowed for only CEE 483 or 583.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 351 and CEE 372 and CEE 353 with a grade of C or greater
CEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**486**	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.	L	Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 321 and CEE 341 and CEE 351 and CEE 361 and CEE 372 with a grade of C or better
CEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Pre-requisites: Honors students only
CEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisites: Engineering Honors students only
CEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**511**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 511 or 412.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Graduate Civil Engineering students only
CEE	**512**	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**513**	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite:Must be a graduate student in Engineering
CEE	**514**	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**515**	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate tudent

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CEE	**516**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**521**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**522**	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**524**	Advanced Steel Structures	Strength properties of steel and their effects on structural behavior. Elastic design of steel structures. Plastic analysis and design of beams, frames, and bents. Plastic deflections. Plastic design requirements. Multistory buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**526**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisite: Engineering CEE Graduate student
CEE	**527**	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**530**	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**532**	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	**533**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**536**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**537**	Topics in Structural Engineering	Advanced topics, including nonlinear structural analysis, experimental stress analysis, advanced finite elements, plasticity and viscoelesticity, composites, and damage mechanics.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisites: Engineering CEE Graduate Students Only
CEE	**540**	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**541**	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**543**	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**544**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		You may not enroll in CEE 544 if you have credit in SOS 551
CEE	**546**	Free Surface Hydraulics	Derivation of 1-D equations used in open channel flow analysis; computations for uniform and nonuniform flows, unsteady flow, and flood routing. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**547**	Principles of River Engineering	Uses of rivers, study of watershed, and channel processes. Sediment sources, yield, and control; hydrologic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**548**	Sedimentation Engineering	Introduces the transportation of granular sedimentary materials by moving fluids. Degradation, aggregation, and local scour in alluvial channels. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**550**	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**551**	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student

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CEE	**553**	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**554**	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**555**	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**556**	Seepage and Earth Dams	Transient and steady-state fluid flow through soil, confined and unconfined flow, pore water pressures, and application to earth dams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**557**	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**558**	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**559**	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**560**	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**561**	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**562**	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**563**	Environmental Chemistry Laboratory	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**564**	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**566**	Industrial/Hazardous Waste Treatment	Emphasizes treatment of local industrial/hazardous waste problems, including solvent recovery and metals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**567**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 567 or 467.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**568**	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CEE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**573**	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**574**	Highway Capacity	Highway capacity for all functional classes of highways. Traffic signalization, including traffic studies, warrants, cycle length, timing, phasing, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**576**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**581**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**582**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering MS or MSE student
CEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering PhD student
CEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CHE	**100**	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2.		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**211**	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHM 116 with C or better; MAT 266 or MAT 271 with C or better

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CHE	**231**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 231 or 501.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHE 211 with C or better; MAT 266 or MAT 271 with a C or better
CHE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**334**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 334 or 502.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 231 or 331 with C or better
CHE	**342**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 342 or 504.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 211 or CHE 311 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
CHE	**352**	Transport Laboratories	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: BS/BSE Engineering students
CHE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**432**	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with a C or better OR Graduate Engineering student
CHE	**433**	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with C or better
CHE	**442**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 442 or 505.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE students; CHE 334 and CHE 342 with a C or better OR Graduate Engineering students
CHE	**451**	Chemical Engineering Laboratory	Operation, control, and design of experimental and industrial process equipment; independent research projects. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 334 with C or better; CHE 342 with C or better; MAE 384 (or ECE 384) with C or better OR Graduate Engineering students
CHE	**458**	Semiconductor Material Processing	Introduces the processing and characterization of electronic materials for semiconductor applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE student; CHE 334 and CHE 342 with C or better OR Graduate Engineering student
CHE	**461**	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	CS	Pre-requisites: Engineering BS or BSE student; MAT 274 or MAT 275 with C or better; MAE 384 or CEE 384 with a C or better OR Graduate Engineering student
CHE	**462**	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; CHE 432, CHE 442 and CHE 433 with C or better OR Graduate Engineering student
CHE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 469 or 569.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**474**	Chemical Engineering Design for the Environment	Conflict of processing materials and preserving the natural resources. Teaches students to understand and value the environment and attempt to control our impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 334 and CHE 342 with a grade of C or better
CHE	**475**	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisite: Engineering BSE student
CHE	**476**	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**477**	Bioseparation Processes	Principles of separation of biologically active chemicals; the application, scale-up, and design of separation processes in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with a minimum GPA of 3.00 OR Graduate Engineering student
CHE	**478**	Industrial Water Quality Engineering	Chemical treatment processing, quality criteria and control, system design, and water pollutants.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 231 or CHE 331 with a grade of C or greater; Seniors only
CHE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**490**	Chemical Engineering Projects	Individual projects in chemical engineering operations and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-5		Pre-requisite: Engineering BSE student
CHE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Pre-requisites: Honors students only
CHE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		

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CHE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**501**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 501 or 231.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**502**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 502 or 334.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**504**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 504 or 342.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**505**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 505 or 442.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in MSE 518, EEE 518, or MSE 475 you may not enroll in CHE 518
CHE	**527**	Advanced Applied Mathematical Analysis in Chemical Engineering	Formulation and solution of complex mathematical relationships resulting from the description of physical problems in mass, energy, and momentum transfer and chemical kinetics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**536**	Convective Mass Transfer	Turbulent flow for multicomponent systems, including chemical reactions with applications in separations and air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**552**	Industrial Water Quality Engineering	Water pollutants, quality criteria and control, chemical treatment processing, and system design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**553**	Air Quality Control	Air pollutant origins, effects, and control. Physical and chemical processes, including dispersion, combustion, sampling, control equipment design, and special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**561**	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student

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CHE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	**101**	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
CHI	**102**	First-Year Chinese II	See CHI 101. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:Must have completed CHI 101 with a grade of D or better or be currently enrolled
CHI	**120**	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**201**	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 102 with a grade of D or better or currently enrolled
CHI	**202**	Second-Year Chinese II	See CHI 201. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 201 with a grade of D or better or currenlty enrolled
CHI	**205**	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**301**	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 202 with a grade of C or better or currently enrolled
CHI	**302**	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 301 with a grade of C or better or currently enrolled
CHI	**307**	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 302, or JPN 202, or KOR 202 with a grade of C or better or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	**308**	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 307 with a grade of C or better, or currently enrolled
CHI	**309**	Chinese Conversation	Aural/oral drills using contemporary stories, articles, and essays. For students with lower-level proficiency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:Must have completed CHI 202 with a grade of D or better or currently enrolled
CHI	**310**	Chinese Conversation	See CHI 309.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**311**	Chinese Conversation	Intensive aural/oral practice in modern Chinese. For students who have lived in China or a Chinese-speaking environment.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		
CHI	**312**	Chinese Conversation	See CHI 311.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**321**	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
CHI	**322**	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
CHI	**345**	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**380**	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**401**	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with C or better
CHI	**402**	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 401 with C or better
CHI	**407**	Chinese for Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	DIS	N	OP4	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 402 with a C or better
CHI	**408**	Chinese for Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 407 with C or better
CHI	**430**	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	**450**	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianti wen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 with a grade of C or better
CHI	**461**	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuanqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 and CHI 307 with a grade of C or better
CHI	**462**	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisties: CHI 302, and CHI 308
CHI	**470**	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with a grade of C or better
CHI	**482**	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites; CHI 302 and CHI 308
CHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student

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CHI	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
CHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**514**	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**520**	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, economics, or other fields.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**543**	Chinese Language and Linguistics	Analysis and discussion, within the framework of linguistic theory, of selected problems in Chinese phonetics, morphology, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**561**	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**585**	Problems of Translation	Theories and practice of translation: strategies for handling a variety of Chinese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**684**	Internship		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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CHI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 113 or CHM 117 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better

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CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: Students who have credit for CHM 107, may not enroll in CHM 101
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ & G	Pre-requisites: Students who have credit for CHM 101, may not enroll in CHM 107
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**114**	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 113 or CHM 117 with C or better
CHM	**117**	General Chemistry for Majors I	Atomic and molecular structure, properties and physical states of matter, chemical analysis, bonding, stoichiometry. Credit is allowed for only CHM 117 or 113. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: Chemistry or Biochemistry majors; CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre-or Co-requisite: MAT 170 (or 210, 251, 265 or 270 (with C or better if completed); Credit for CHM 113 or 117 only
CHM	**118**	General Chemistry for Majors II	Atomic and molecular structure, properties and physical states of matter, chemical analysis, bonding, stoichiometry. Credit is allowed for only CHM 118 or 115 or 116. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 117 with C or better; Chemistry and Biochemistry majors only
CHM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
CHM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)

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CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**240**	Introduction to Physical Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	CS	Pre-requisites: MAT 272 or MAT 267 with C or better
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**302**	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	**303**	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisites: CHM 325 with C or better if completed
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**333**	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds. Credit is allowed for only CHM 333 or 231 or 233.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Must be a Biochemistry or Chemistry student; CHM 116 or 118 with C or better
CHM	**334**	Organic Chemistry for Majors II	Continuation of CHM 333. Credit is allowed for only CHM 334 or 234.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Biochemistry or Chemistry student; CHM 333 with a C or better
CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**337**	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions. Credit is allowed for only CHM 337 or 237. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; Pre- or Co-requisite: CHM 333 (with C or better if completed)
CHM	**338**	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337. Credit is allowed for only CHM 338 or 238. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; CHM 337 with C or better; Pre or Co-requisites: CHM 334
CHM	**341**	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114, 116 or 118 with C or better; CHM 231, 233 or 333 with C or better; MAT 210, 251, 265 or 270 with C or better; PHY 101, 112 or 131 with C or better.
CHM	**343**	Physical Chemistry Laboratory	Physical chemistry experiments. Credit is allowed for only CHM 343 or both CHM 348 and 349. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 341 with C or better or co-enrolled in CHM 341
CHM	**345**	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Prerequisites: CHM 240 with C or better or both MAT 272 and 274 with C or better
CHM	**346**	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 345 with C or better
CHM	**348**	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. fee. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	**349**	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**424**	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	**433**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 AND CHM 341 or 346, with C or better
CHM	**434**	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 433 or CHM 531 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**435**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 361 (or BCH 461), BIO 353 and CHM 234 (or CHM 334) with a C or better; You may not enroll in CHM 435 if you have credit for CHM 535
CHM	**452**	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-2	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	**453**	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**460**	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	**471**	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341(or 346) or GLG 321 with C or better
CHM	**483**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Barrett Honors College students only
CHM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**501**	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**521**	Chemometrics	Overview of chemometric tools in analytical chemistry, including multivariate calibration, spectral deconvolution, and experimental design.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**523**	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**524**	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**525**	Analytical Spectroscopy	Theoretical and practical considerations involving the use of optical instruments for chemical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		
CHM	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
CHM	**531**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**532**	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**535**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Students may not enroll in CHM 535 who have credit in CHM 435
CHM	**537**	Organic Reactions	Organic synthetic methodologies and important synthetic reactions emphasizing recently discovered reactions of preparative value. Protection/deprotection synthetic strategies; peptide synthesis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**541**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 541 or MSE 524
CHM	**543**	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry. Covers electronic structure methods and computer simulation techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM, NAN or PHY 544
CHM	**545**	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**546**	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**548**	Chemical Kinetics and Dynamics	Experimental and theoretical aspects of time-dependent processes in chemistry. Topics include kinetics of chemical reactions, diffusion, and relaxation phenomena in ordered and disordered materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**549**	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**552**	Advanced Inorganic and Materials Synthesis Laboratory	Preparation and characterization of inorganic compounds and materials, emphasizing advanced methods and techniques of importance in inorganic and materials chemistry. Schlenk-line and glovebox manipulations, solvothermal syntheses, and gas-phase reactions.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		
CHM	**553**	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**571**	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**579**	Topics in Inorganic and Materials Chemistry		N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**582**	Topics in Geochemistry and Cosmochemistry	Topics of current interest for students in chemistry and other fields. Sampling of data and thought concerning phase equilibria, element distribution, meteorites, the Earth, and other planets.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		
CHM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	2.		Pre/Co-requisite: CHM 327 with C or better if completed

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CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ & G	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CHP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
CHP	**501**	Community Health Assessment and Analysis	Provides theory and practice in community assessment and analysis applicable to community health practice.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Nursing) or Nursing (Comm Health Adv Prac) student; CHP 500 with B or better; Co-requisite: NUR 581
CHP	**502**	Community Health Program Planning and Evaluation	Utilizes planning and evaluation theory in planning programs to meet identified health needs of communities.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Adv Prac) student; CHP 501 with B or better
CHP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
CIM	**105**	Introduction to the Concrete Industry	Overview of the history, career opportunities, job functions, and professional organizations in the concrete industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIM	**106**	Fundamentals of Concrete: Properties and Testing	Examines effects of concrete-making materials on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: CIM 105 with C or better; Co-requisite: STP 226
CIM	**205**	Concrete Construction Methods	Forming, shoring, placing and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for foundations and other structural members.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 106 with C or better; CON 252
CIM	**206**	Application of Concrete in Construction	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 205 with C or better; CON 243 with C or better
CIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	**305**	Management of Concrete Products: Ordering and Delivering	Basic understanding of managing the order and delivery process common to all concrete products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better; CON 221 with C or better
CIM	**306**	Management of Concrete Products: Production Facilities	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 305 and CON 251 with C or better; CON 271
CIM	**405**	Concrete Problems: Diagnosis, Prevention, and Dispute	Diagnose and prevent problems related to concrete production, testing, construction, and performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better
CIM	**406**	Concrete Industry Management Capstone	Intensive study of a problem appropriate to the major and the student's career interests. Lecture, student presentations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS student; CIM 405 with C or better; COM 225
CIM	**420**	Senior Concrete Lab	Reintroduces fundamental lab procedures as well as advanced testing methods. Collect data, search for literature, analyze and report on conclusions.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Contruction BS student; CIM 405 with C or better
CIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIS	**105**	Computer Applications and Information Technology	Introduces business information systems and the uses of business application software with emphasis on database and spreadsheet packages. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	
CIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	**220**	Programming Concepts for Accountancy Majors	Introduces business computer programming. Uses programming languages such as Visual BASIC to teach proper programming style and practice. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		
CIS	**235**	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	**236**	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	Pre-requisites: Must be an Honors student
CIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	**300**	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	**335**	Visual Paradigms for Information Systems Development	Uses visual programming languages such as Visual BASIC to implement data structures, file structures, and interfaces in business information systems. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey ACC BS student having completed CIS 220 OR CIS BS student having completed CSE 100, AND ACC 241 AND ECN 221 with a grade of C or greater
CIS	**340**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C#. Fee.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: Must be W. P. Carey CIS BS student; AND must have completed ACC 241 or ACC 271, CIS 235 or CIS 236, CSE 181 or CSE 182, and ECN 221 with a C or greater
CIS	**360**	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey Accountancy BS student, and CIS 105 or CIS 220 or 236, ACC 231 or 261, and ACC 241 or 271 with a grade of C or better; OR W. P. Carey Computer Information Systems BS student, and CIS 235 or 236 with a grade of C or better.
CIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
CIS	**425**	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 with C or better
CIS	**430**	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as.NET and networked UNIX. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	**440**	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.	L	Pre-requisites: W.P. Carey Computer Information Systems BS student; CIS 360 and CIS 430 with C or better
CIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Pre-requisites: Must be an Honors student
CIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W.P. Carey ACC BS or CIS BS student
CIS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Pre-requisites: W.P. Carey CIS BS student
CIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student
CIS	**502**	Information Systems	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: W.P.Carey MBA student
CIS	**505**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems, abstract data types and object-oriented programming using a visual language.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey graduate students only
CIS	**506**	Business Database Systems	Hierarchical, network, relational, and other recent data models for database systems. Processing issues such as concurrency control, query optimization, and distributed processing.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**512**	Intelligent Decision Systems and Knowledge Management	Definition, description, construction, and evaluation of computer-based decision systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**515**	Management Information Systems	Systems theory concepts applied to the collection, retention, and dissemination of information for management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**520**	Systems Design and Evaluation	Methodologies of systems analysis and design. Issues include project management, interface, organizational requirements, constraints, documentation, implementation, control, and performance evaluation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**530**	Information Systems Development	Object-oriented and interprocess communication and control concepts for information systems; applications based on languages such as C++ and platforms such as networked UNIX.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**535**	Distributed and Mixed-Media Information Systems	Modern communications protocols for wireless and mobile computing, overview of network and distributed database management systems, overview of storage and multimedia delivery issues, and shared virtual reality technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		
CIS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		
CLS	**100**	Introduction to Clinical Laboratory Sciences	Introduces the field of clinical laboratory sciences. Required for Clinical Laboratory Sciences majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
CLS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CLS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
CLS	**310**	Principles of Clinical Chemistry I	Theory and application of principles of clinical chemistry, with emphasis on lab techniques, pathophysiology, methods of analysis, and assessment of procedure. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**320**	Principles of Clinical Microbiology I	Theory and application of principles of clinical microbiology with emphasis on isolation and identification of medically significant fungi and bacteria. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		

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CLS	**330**	Principles of Clinical Hematology I/Body Fluids	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**410**	Principles of Clinical Chemistry II	Continuation of CLS 310 with emphasis on principles of advanced clinical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**411**	Advanced Applications of Clinical Chemistry	Clinical application of theory/techniques from CLS 310 and 410. Emphasizes operation of common lab instrumentation and clinical correlation. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**420**	Principles of Clinical Microbiology II	Disease mechanisms and identification of medically significant parasites, Mycobacteria, Actinomycetes, Chlamydia, Rickettsia, Mycoplasma, and viruses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**421**	Advanced Applications of Clinical Microbiology	Practical lab application of the principles of specimen collection, processing, detection, identification, and antimicrobial testing of medically significant bacteria, fungi, and parasites. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**430**	Principles of Clinical Hematology II/Hemostasis	Theory and applications of principles in hematology with emphasis on etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**431**	Advanced Applications of Clinical Hematology	Practical lab application of methods/techniques used to evaluate and diagnose blood dyscrasias/hemostatic defects. Applied techniques in body fluid analysis. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**440**	Principles of Clinical Immunology/Immunohematology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**441**	Advanced Applications of Clinical Immunology/Immunohematology	Practical lab application of the principles of serological methods used in diagnosing disease and selecting blood components for transfusion therapy. Minimum 135 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**450**	Principles of Clinical Laboratory Administration	Principles of management, emphasizing the clinical lab. Basic management process, personnel supervision, identification, and allocation of resources. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	
CLS	**460**	Principles of Clinical Laboratory Education	Principles of learning, with application to the development of instructional objectives, strategies, and evaluation for teaching-learning situations in the lab. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	
CLS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
CMN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
CMN	**502**	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**505**	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**506**	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**515**	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**516**	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**520**	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**522**	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**531**	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**532**	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**550**	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**551**	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better

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CMN	**557**	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**565**	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**570**	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not adressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
CMN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: Communication Studies Master of Arts student
CMN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisite: Communication Studies Master of Arts student
CMN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
COE	**501**	Introduction to Research and Evaluaton in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**271**	Voice Improvement	Intensive personal and group experience to improve normal vocal usage, including articulation and pronunciation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**281**	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**298**	Honors Directed Study		N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honor student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**323**	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	C	Pre-requisites: Must have a minimum cumulative GPA of 2.50; Must have completed COM 100 with a grade of C or greater
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**326**	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**341**	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**344**	Performance of Oral Traditions	Cultural beliefs and values studied through ethnographic research and performance of personal narratives, folklore, myths, legends, and other oral traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**404**	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**407**	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA of greater than or equal to 2.50; Must have completed COM 308 with a grade of C or greater
COM	**408**	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA greater than or equal to 2.50; Must have completed COM 308 with a C or better. Credit given for COM 408 or 508 only
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA

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COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**426**	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**441**	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	**442**	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	**445**	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	**446**	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications students only and have completed 56 or more hours; Minimum cumulative GPA of 2.50; COM 225 and COM 308 with a C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisites: Must have a minimum cumulative GPA of 2.50
COM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**501**	Research Methods in Communication	Critical analysis of systems of inquiry in communication, focusing on the identification of variables and approaches to conducting research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**504**	Theories and Models in Communication	Theory construction, metatheoretical concerns, models, construct definition, and comparative analysis of current theories in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**508**	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508

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COM	**509**	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must be a Graduate Communications student
COM	**521**	Rhetorical Criticism of Public Discourse	History and significance of rhetorical theory and criticism in the analysis of public discourse.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**604**	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**607**	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**608**	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**609**	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		
COM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**124**	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	C	
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-req 25 minimum hours
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**309**	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have GPA of 2.0 or greater
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**324**	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**353**	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**416**	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**417**	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**422**	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: Must be a Junior and have a GPA of 2.0 or greater, AND completed ENG 101 or 105 with a grade of C or greater
COM	**424**	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**429**	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**451**	Employee Participation Processes in Organizations	Communication principles and practices associated with employee empowerment, team-based organizing, and similar employee involvement processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 308 or COM 309 with C or better; minimum GPA of 2.0
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**454**	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**457**	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**471**	International Communication	Explores the political, economic, sociocultural, and communicative dimensions of mediated communication across borders and the processes of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	Pre-requisites: Minimum 2.0 GPA; CMN 463 or COM 463 with C or better
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Communication studies major or Public Relations and Strategic Communication minor students; minimum 56 hours; minimum cumulative GPA of 2.80; COM 225 (CMN 225) with C or better; COM 308 or COM 309 with C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
CON	**100**	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CON	**101**	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	HU & H & G	
CON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**221**	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: PHY 111 and PHY 113 and MAT 265 (or MAT 270) with C or better
CON	**223**	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 221 with C or better
CON	**241**	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**243**	Heavy Construction Equipment, Methods, and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**251**	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**252**	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**271**	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CON 252 with D or better; CON 243 with C or better
CON	**273**	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**296**	Field Internship	Participation as interns on construction projects to observe and experience the daily activities. fee	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Construction students only
CON	**301**	Megaprojects and Their Impacts on Society	World survey of construction megaprojects and their impacts on the environment, technology, local and global economies, and local culture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**302**	Construction Workforce Issues	Examines issues and forces that have shaped today's construction workforce, including relations among gender, racial, ethnic, and class groups.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**310**	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 221 with C or better; CON 223 with C or bettter
CON	**341**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**345**	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; PHY 111 (or PHY 121) with C or better; PHY 113 (or PHY 122) with C or better; CON 221 with C or better; CON 252
CON	**377**	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	**383**	Construction Estimating	Analyzes construction drawings and specifications. Methods used in estimating process. Quantity surveying techniques for CSI divisions. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS or Housing & Urban Development BSD students; CON 243 and CON 221 with a C or better; CON 252 with a D or better
CON	**389**	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students; CON 221 with C or better; CON 251 with D or better
CON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	**424**	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering Construction BS students; CON 223 with C or better; Pre or Co-requisites: CON 310 (with C or better if completed)
CON	**446**	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: COM 225; CON 221 with C or better
CON	**450**	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS students only; Must have completed CON 310 with a grade of D or greater or be currently enrolled
CON	**453**	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 271, or CON 371; CON 383 with C or better; Co-requisite: CON 495
CON	**455**	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 495 and CON 453 with C or better
CON	**468**	Mechanical and Electrical Estimating	Analysis and organization of performing a cost estimate for both mechanical and electrical construction projects. Computer usage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 273; CON 345 and CON 383 with C or better
CON	**471**	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Prerequisite: Construction BS student; CON 453 with C or better
CON	**472**	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	**477**	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	**483**	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 383 with C or better
CON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Construction BS students; Must have completed CON296 with D or better or currently enrolled
CON	**486**	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites:Construction BS Student; Must have a C or better in CON 383
CON	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		
CON	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Pre-requisites: Must be an Honors student
CON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**495**	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students only; Must have completed CON 383 and CON 389 with a grade of C or better

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CON	**496**	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisites Engineering CON BS students; Must have completed COM 225 with a D or better, and CON 453 with a C or better
CON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**501**	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**533**	Strategies of Estimating and Bidding	Explores advanced concepts of the estimating process, such as modeling and statistical analysis, to improve bid accuracies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering MS/MSE/PHD graduate students
CON	**540**	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**543**	Construction Equipment Engineering	Analyzes heavy construction equipment productivity using case studies. Applies engineering fundamentals to the planning, selection, and utilization of equipment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction MS students
CON	**545**	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**547**	Strategic Planning	Business planning process of the construction enterprise. Differences between publicly held and closely held businesses and their exposure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**551**	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**554**	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**561**	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering Graduate student
CON	**563**	Facility Management Fundamentals	Operations and maintenance, environmental issues, computerized management and maintenance systems, strategic planning, asset management, construction and design, and LEED/LEED-EB.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**565**	Information Measurement Theory I	Simplistic, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**567**	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**570**	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor¿s viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**571**	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 570 with C or better
CON	**575**	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**589**	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering MS, MSE or PHD student

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CON	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1.		
CON	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering MS/MSE/PHD Students
CON	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**700**	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		
CON	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**111**	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher

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CPI	**211**	Game Development II	Introduces multiplayer games, artificial intelligence, and tile-based worlds using Macromedia Flash. Uses ActionScript tool to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate student or BIS student with Computer Gaming emphasis; CPI 111 with C or better
CPI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**311**	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with a C or better
CPI	**321**	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with C or better
CPI	**360**	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 200 with C or better
CPI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**400**	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	**411**	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**412**	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPI	**421**	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**422**	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems. Credit is allowed for only CPI 430 or ASB 430.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: CPI 200 with C or better; AML 100 or MAT 142, 170, 210, 265 or MAT 270 with C or better or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; Credit is allowed for only ASB 430, AML 330 or CPI 430
CPI	**441**	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 411, CPI 412, CPI 421, CPI 422 or DCI 451 with C or better
CPI	**470**	Application of Modeling and Visualization	Applies modeling, computing, and visualization techniques to real data; presents results in a meaningful visual environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1.		Pre-requisite: CPI 400

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CPI	**480**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
CPI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1.		
CPI	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Pre-requisites: Must be an Honors student
CPI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**613**	Child Counseling	Applies counseling theory in working with children in clinics and elementary schools. Integrated practicum available with instructor approval.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**622**	Group Counseling	Theories and methodologies used in group counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY622
CPY	**623**	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**634**	Organizational Development and Planned Change	Organizational/individual dynamics, including theory, analysis, techniques, and consultation/intervention strategies used in organizational development.	N	FLD	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Technology and Innovation or Fulton Engineering Graduate student
CPY	**644**	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577
CPY	**645**	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**650**	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 522
CPY	**651**	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 523

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CPY	**660**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	**667**	Patterns of Behavior Disorders	Etiology and treatment of a variety of psychological problems, particularly those represented in DSM III-R.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY667
CPY	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	**670**	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate students only
CPY	**671**	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**672**	Human Diversity: Social Psychological Perspectives	Implications for psychological practice of social, psychological, and biological factors in the development of behavioral differences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**674**	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**675**	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	**676**	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate students only
CPY	**677**	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	**678**	Supervision Theory	Models of therapist development and clinical supervision.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**679**	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**694**	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate students only
CPY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**701**	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**702**	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: COE 502
CPY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	**610**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**620**	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
CRD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-15		
CRD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-15		
CRJ	**100**	The Justice System	Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	
CRJ	**230**	The Police Function	Introduces policing in the United States covering the history of police, contemporary police work, and problems in policing.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**240**	The Correctional Function	Introduces the structure and function of the corrections system from historical and contemporary perspectives.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**302**	Research Methods	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Also stresses methods for conducting research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Must have completed CRJ 100, or 301, JUS 100, or 105, or 305 with a grade of C or greater; or be currently enrolled in any one of these
CRJ	**303**	Statistical Analysis	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the administration of justice area.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	CS	Pre-requisites: MAT 114, 117, 119, 142, 170 or 210 with C or better; CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**304**	Criminology	Provides a basic overview of the nature, the causes and consequences, and the theories of criminal behavior.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**305**	Women, Crime, and Justice	Studies women as offenders, victims, and professionals in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**306**	Race, Ethnicity, and Justice	Studies minority issues in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**312**	Police and Culture	Covers broad concept of culture, theoretical approaches to police subculture, and major themes that characterize police culture (suspicion, danger, solidarity, and isolationism).	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better or currently enrolled; CRJ 230 (AJS 230) with C or better or currently enrolled
CRJ	**314**	Innovations in Policing	Examines current theories and research findings that guide police work, and the practical implications of evaluation within police departments.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better or currently enrolled; CRJ 230 (AJS 230) with C or better or currently enrolled
CRJ	**315**	Police Organization and Management	Provides a thorough understanding of the structure, processes, and behavior of police organizations.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better; CRJ 230 (AJS 230) with C or better
CRJ	**320**	The Adjudication Function	History and development of courts, trial by jury, and other dispute resolution mechanisms; selection and removal of judges and juries; organization, structure, and jurisdiction of courts; trial and nontrial processes of the judiciary.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:Must have completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or be currently enrolled, or co-enrolled in either of these courses

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CRJ	**340**	Juvenile Justice	Critical examination of the history and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**350**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled, or co-enrolled in either of these courses
CRJ	**360**	Substantive Criminal Law	Criminal liability. Crimes against persons, property, and society. Governmental sanctions of individual conduct as formulated by legislatures and the courts.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**410**	Procedural Criminal Law	The criminal process. Constitutional and legal problems associated with arrest, search and seizure, and due process of law.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled
CRJ	**420**	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater,
CRJ	**441**	Prevention of Crime and Delinquent Behavior	Theories of prevention, individual, group, and community approaches: intervention at appropriate stages; contemporary law enforcement, and corrections practices.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled.
CRJ	**442**	Community Relations in the Justice System	Focuses on developing an informed plan and policy for incorporating research findings about the surrounding community within various justice services and agencies. Topics include social stratification, minority groups, and victimology.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled
CRJ	**443**	Probation and Community Corrections	Examines the probation and parole functions as well as the numerous and diverse types of community corrections programs.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100,or 301,or CRJ 100,or 301,or JUS 100,or 105,or 305 with a C or greater or be currently enrolled in one;and completed AJS 240,or CRJ 240 with a C or greater or be currently enrolled in CRJ 240.
CRJ	**461**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these.
CRJ	**462**	Gangs	Critical examination of the history and development of gangs, including criminal justice system responses to gangs and gang-related behaviors.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these.
CRJ	**463**	Occupational Crime	Overview of major issues in business, professional, and official rule violations. Includes consumer fraud, securities violations, unethical professionalism, and political corruption.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better
CRJ	**464**	Organized Crime	The nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled.
CRJ	**470**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	L or SB	Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or enrolled in; and completed ENG 101or 105 with a C or greater
CRJ	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		
CRJ	**485**	Student Assessment	Students may attend a mid-semester information session on the assessment process. At the end of the semester, students take part in a standardized examination and self-administered survey. Y/E grade only. Students must register for this class their final semester.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	0.		
CRJ	**492**	Honors Directed Study		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6		
CRJ	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6	L	Pre-requisites: Must be an Honors student
CRJ	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-3		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these
CRJ	**501**	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**502**	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	**503**	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**504**	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**505**	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**510**	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**511**	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**512**	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**513**	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**514**	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**515**	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**516**	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**517**	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**518**	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**519**	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**520**	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**521**	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**522**	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**524**	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**525**	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**534**	Program Evaluation in Criminal Justice	Covers methods of program evaluation, principles of research design, and evaluation tools and resources.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Criminology and Criminal Justice	1.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**601**	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**602**	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**603**	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**604**	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**605**	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**606**	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**607**	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**608**	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**609**	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**610**	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**611**	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**612**	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**613**	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**101**	Introduction to Computer Science and Engineering	Introduces topics in computer science and computer engineering; familiarization with CSE curriculum subdisciplines and topics. Design of computer software and systems, exploring and experimenting with systems, teamwork, professional opportunities, computer models and programming, communication. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	2.		
CSE	**110**	Principles of Programming with Java	Concepts of problem solving using Java, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**182**	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**183**	Success in Computer Science and Engineering Programs	Overview of the computer science and computer systems engineering fields as well as academic success tips for students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**205**	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	Pre-requisites: CSE 100 or 110 with C or better or currently enrolled
CSE	**220**	Programming for Computer Engineering	Introduces procedure programming languages (C/C++) and hardware descriptive language (VHDL). fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites:Computer Science & Engineer PRE or BSE; Must have received a C or greater in CSE 120 or EEE 120 AND CSE 205 or CSE 210
CSE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: CSE 120 or EEE 120 with C or better; CSE 100, CSE 110 or CSE 200 with C or better OR Computer Science & Engr Graduate student; Credit for CSE 230 or CSE 330 only
CSE	**240**	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: CSE 205 with C or better
CSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		
CSE	**301**	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Computer Science & Engineering BS/BSE student; CSE 205 with C or better
CSE	**310**	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engineering BSE, Computer Science BS, Computational Math Sciences BS or Biomedical Informatics BS student; CSE 205 with C or better; MAT 243 with C or better (CMS students may substitute MAT 300) or CSE Graduate students
CSE	**320**	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better; Credit for CSE 320 or CSE 422 only
CSE	**325**	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better or currently enrolled; CSE 230 or EEE 230 with C or better or currently enrolled; Credit for CSE 325 or CSE 421 only
CSE	**340**	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE Graduate students
CSE	**355**	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Syst Engr BSE or Computer Science BS students and have received a C or greater in CSE 310 OR CSE Graduate students
CSE	**360**	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS students and have received a C or greater in CSE 220 or CSE 240 OR CSE Graduate students; or BMI BS (ESBMIBS) students and have received a C or greater in CSE 310

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CSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**408**	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS students CSE 310 with C or better
CSE	**412**	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: - Computer Systems Engr BSE, Computer Science BS student, or Biomedical Informatics student; CSE 310 with a C or better
CSE	**414**	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 412 with a C or better or currently enrolled
CSE	**420**	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better or currently enrolled
CSE	**423**	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 320, 325, 360 with a C or better; May not enroll if received a C or better in CSE 461 or 485
CSE	**424**	Systems Capstone Project II	Continuation of capstone project started in CSE 423. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science or Computer Systems Engr BS or BSE students; Must have received a C or greater or be currently enrolled in CSE 423
CSE	**430**	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better; CSE 310 with a C or better OR Graduate CSE student
CSE	**432**	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering or Computer Science BS/BSE student; CSE 430 with C or better
CSE	**434**	Computer Networks	Distributed computing paradigms and technologies, distributed system architectures and design patterns, frameworks for development of distributed software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better or currently enrolled.
CSE	**438**	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 325 with C or better
CSE	**440**	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 340 with a C or better or currently enrolled; CSE 355 with a C or better or currently enrolled.
CSE	**445**	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 360 or be currently enrolled.
CSE	**450**	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**457**	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering or Computer Science - BS students and a grade of C or better in CSE 355 or be currently enrolled.
CSE	**459**	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 355 with a C or better or currently enrolled.
CSE	**460**	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 360 with a C or better or currently enrolled.
CSE	**461**	Software Engineering Project I	First of two-course software team-development sequence. Planning, management, design, and implementation using object-oriented technology, CASE tools, CMM-level-5 guidelines. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engineering or Computer Science BS student; Pre-or Co-requisite: CSE 460 (with C or better if completed); May not enroll in CSE 461 if received C or better in CSE 423 or CSE 485
CSE	**462**	Software Engineering Project II	Second of two-course software team-development sequence. Software evolution, maintenance, reengineering, reverse engineering, component-based development, and outsourcing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 461 with C or better
CSE	**463**	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 310 with a C or better or currently enrolled.

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CSE	**465**	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Information Systems, Computer Systems Engineering BSE, Computer Science BS or Industrial Engineering BSE students and a grade of C or better in CIS 300 or CSE 360 or IEE 305 or currently enrolled
CSE	**466**	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	**467**	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science or Computer Systems Engineering students; CSE 310 completed with a C or better
CSE	**468**	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 with C or better
CSE	**470**	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better or currently enrolled in CSE 310 AND a grade of D or better in MAT 342 or 343 or currently enrolled.
CSE	**471**	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 AND CSE 240 or be currently enrolled.
CSE	**476**	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**477**	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems & Engineering BSE or Computer Science BS students; MAT 343 (or MAT 342) with D or better
CSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**485**	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 and CSE 360 with C or better; may not enroll if received a C or better in CSE 423 or CSE 461
CSE	**486**	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 485 or currently enrolled.
CSE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Pre-Requisites: Must be an honors student.
CSE	**493**	Honors Thesis		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Pre-requisites: Must be an honor student.
CSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering or Computer Science - BS student and cumulative GPA must be greater than or equal to 2.50 OR Graduate Engineering students.
CSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	**507**	Virtual Reality Systems	Computer-generated 3-D environments, simulation of reality, spatial presence of virtual objects, technologies of immersion, tracking systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science PHD, Computer Science MCS, Comp Sci/Engr (Info Assurance) PHD or Comp Sci (Art/Media/Engr) PHD students AND C or better in CSE 408 or CSE 470 or CSE 508
CSE	**509**	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, MPEG 1, 2, 4, and 7 standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science Engineering graduate student
CSE	**510**	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**511**	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**512**	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**515**	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**520**	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**522**	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**530**	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**531**	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**532**	Advanced Operating System Internals	Memory, processor, process and communication management, and concurrency control in the Windows NT multiprocessor and distributed operating system kernels and servers. Ability to understand advanced concepts in operating systems is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**534**	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**535**	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**536**	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**539**	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**543**	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**545**	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**548**	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**550**	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**552**	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In may applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**555**	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**561**	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**563**	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**564**	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**565**	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**566**	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**570**	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**571**	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**573**	Advanced Computer Graphics II	Modeling of natural phenomena: terrain, clouds, fire, water, and trees. Particle systems, deformation of solids, antialiasing, and volume visualization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**574**	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**576**	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**577**	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**578**	Advanced Geometric Modeling II	Advanced concepts of geometric modeling: Bezier curves, B-spline curves, blossoming, polygons, geometric algorithms, shape analysis. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**579**	NURBS: Nonuniform Rational B-Splines	Projective geometry, NURBS-based modeling, basic theory of conics and rational Bezier curves, rational B-splines, surfaces, rational surfaces, stereographic maps, quadrics, IGES data specification.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student or a Mathematics PHD student
CSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisites: Must be a Computer Science or Computer Science Engineering graduate student
CSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		

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CSE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	CS	
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CSS	**432**	Issues in Chicana and Chicano Gender	Analyzes social construction of gender identities; emphasis on impact of American and Mexican cultural values on normative gender relations.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
CSS	**490**	Field Studies in the Chicana and Chicano Community	Introduces principles and methods of qualitative research applied to the Chicana and Chicano community.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
CST	**100**	Object-Oriented Software Development I	Basic concepts of object-oriented analysis, design, and programming using Java. Basic Java variables, expressions, arrays, statements, methods, and classes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**150**	Digital Systems	Number systems and arithmetic, Boolean algebra, combinational logic, K-maps, ROMs, PLAs, flip-flops, synchronous sequential circuits, introduction to HDL.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites:CST 100, or be co-enrolled in CST 100; MAT 117 or higher
CST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-3		
CST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**200**	Object-Oriented Software Development II	Object-oriented programming and design; information hiding; inheritance and run-time binding; polymorphism; recursion; GUI programming. Introduces software engineering concepts, including software development life cycles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 100 with a D or better
CST	**201**	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre/Co-requisite: CST 200
CST	**220**	Programming Languages for Technology with C/C++ and Scripting	Programming language design and implementation concepts through programming C/C++ and scripting; language paradigms, compilation and interpretation, types, run-time management, data control, pointers, inheritance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 150, and CST 200 with a D grade or better
CST	**230**	Applied Data Structures	Applications of data structures: strings, stacks, queues, trees, hash tables. Time/space complexity, recursion, searching, and sorting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 200 and MAT 243 with D or better
CST	**250**	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Must have taken CST 100, & 150 with a D or better. Must be co-enrolled in CST 251
CST	**251**	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**256**	C Programming for Engineering Technology	Applied and practical problem solving using the C programming language.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**298**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**315**	Software Enterprise I: Tools and Process	Introduces tools and techniques used in software enterprise/development, including coding, design, testing, configuration management, and personal process management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Completed CST 200 and CST 230 with a D or better
CST	**316**	Software Enterprise II: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**335**	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 230; MAT 243
CST	**350**	Digital Systems Design with Verilog	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET150 or CST150 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**359**	Internet Networking Protocol	Computer networking for application, transmission control and network layers using the Internet protocols as a model; reliability and security.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**364**	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must have earned D or greater in CET 200 or CST 200 or be currently enrolled AND earned D or greater in CET 354 or CST 354 or be currently enrolled OR must be Technology Science BAS, MS, MSTECH, or Master Computing Studies student
CST	**383**	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Must be Technology Science non-degree or BS student AND earned C or greater in CET 100, CET256, CST100, or CST256 or currently enrolled OR must be Technology Science BAS, MS, MSTECH, Master Computing Studies, or Engineering PHD student
CST	**386**	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Tech Science or Eng BS/BSE/BAS/NonDegree AND C or greater in CST100 or CST256 AND C or greater in CST 250/251 OR Tech Sci BAS/MS/MSTECH, Master Comp Studies or Eng PHD student
CST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**415**	Software Enterprise III: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	L	
CST	**416**	Software Enterprise IV: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 415; ENG 102, 105, 108 or 112
CST	**420**	Foundations of Distributed Web-Based Applications in Java	Principles underlying design and implementation of distributed software components; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be Technology Science BAS/BS/MS/MSTECH student AND earned a C or greater in CET 230 or CST 230 or be currently enrolled AND earned a D or greater in CET 386 OR CST 386 or be currently enrolled
CST	**425**	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**427**	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**428**	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**433**	Database Technology	Introduces database technologies and DBMS, data models, and languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 230 and MAT 243 completed with a C or better or currently enrolled
CST	**441**	Software for Personal Digital Assistants	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**452**	Advanced Digital Systems Design with VHDL	Uses VHDL to design components of computers and digital systems. Design examples include RISC processor and ALU, memory controller, I/O controller. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**456**	Microcomputer Systems Interfacing	Programming using BIOS and DOS routines. Disk operations, TSR routines, and device drivers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 354 or CST 354 with C or better or enrolled; CET 420 or CST 420 with D or better or enrolled OR Techn and Innovation or Fulton Engr graduate student
CST	**457**	Advanced Assembly Language Applications	Applies 32-bit assembly language programming using advanced assembler techniques and interfacing to high-level languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CST 354 with D or better; CET 354 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**458**	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**473**	Digital/Data Communications	Signals, distortion, noise, and error detection/correction. Transmission and systems design. Interface techniques and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		
CST	**481**	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**482**	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**483**	Cyber Security Capstone Project	Applies security techniques to a real-world situation. Development of security policy, risk solutions, and incident response facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	2.		
CST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**486**	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET383 or CST 383 with C or better; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering Graduate student
CST	**488**	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be either Technology Science or Engineering BS/BSE/BAS/Graduate NonDegree/ MS/MSTECH AND earned C or greater in CET383 or CST383 AND CET386 or CST386 or be currently enrolled OR must be Tech Sci MS/ MSTECH or Eng PHD student
CST	**489**	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be either Technology Science or Engineering BS/BSE/BAS/Graduate NonDegree/MS/ or MSTECH AND earned D or greater in CET383 or CST383 or be currently enrolled AND earned D or greater in CET459 or CST459 or be currently enrolled
CST	**490**	Reading and Conference		N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
CST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
CST	**496**	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-7		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering Graduate student
CST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-3		
CST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**520**	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequistes: CET364 or CST364 OR Graduate, Non-Degree, or Post Bacc student AND College of Engineering & Applied Sciences or School of Technology
CST	**533**	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
CST	**540**	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420
CST	**552**	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
CST	**554**	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**556**	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 420
CST	**557**	Embedded Applications Development	Current trends in embedded system development using C, assembly, and special purpose hardware. Development versus target environment issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**566**	Principles and Practices of Operating Systems	Principles and practices of operating systems: virtual memory systems, I/O devices and systems, file systems and organization, and other topics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**576**	Embedded Real-Time Programming	Topics in real-time embedded operating systems such as synchronization, communications, file systems, and memory sharing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
CST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**586**	Digital Modeling Techniques	Digital system modeling and simulation using hardware description languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering	1-12		
CST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-15		
CST	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
DAH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**301**	Philosophy and Criticism of Dance	Philosophical issues in dance and dance criticism, with emphasis on written analysis and interpretation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
DAH	**492**	Honors Directed Study	Consult with an honors advisor before enrolling. May be repeated for credit.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DAH	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DAH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**495**	Theory and Methods of Dance Research	Examines modes of inquiry, data gathering techniques, data analysis and representation, prospectus design, and presentation style for dance research studies. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**502**	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DAH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DAH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		
DAH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DAN	**122**	Rythmic Theory for Dance II		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**130**	Dance	Introduces styles and forms of dance; ballet, modern, jazz, tap, ballroom, ethnic. Fee.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**321**	Music Literature for Dance	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN222 and MUS340 with a grade of C or greater or be currently enrolled
DAN	**330**	Dance	Advanced levels. Continuation of DAN 230. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**351**	Methods of Teaching Ballet	Analysis and acquisition of teaching techniques and materials for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**352**	Dance Education Theory	Motivation; learning; assessment; historical, cultural, and social constructs; outreach; service; advocacy; curriculum development in dance education. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance major
DAN	**354**	Integrated Approaches to Dance Education	New methods of dance education pedagogy. Essential skills to employ and integrate instructional technology within dance curricula. Activities promote experiential and layered instruction in integrated approaches to multicultural pedagogy that include interdisciplinary, integrated, and immersion strategies of education. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**356**	Teaching Contemporary Dance	Frameworks, skills, and strategies for teaching contemporary dance practice in multiple settings. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must be a Dance Education student
DAN	**364**	Choreography and Accompaniment	Experience in the use of traditional and nontraditional musical structures as a basis for choreographic projects.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-Requisites: Must have completed DAN265 with a grade of C or greater or be currently enrolled
DAN	**365**	Advanced Choreography	Investigation and practice of contemporary styles of choreography.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN364 with a C or greater; must have completed DAN265 with a C or greater or be currently enrolled
DAN	**380**	Performance Studies Practicum	Focus on developing rehearsal skills and achieving performance excellence through the preparation of three completed works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**435**	Technique and Theory of Ballet	Study of professional advanced ballet technique with emphasis on preparation for performance. 4 hours weekly. May be repeated for credit.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DAN	**445**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement investigation, observation, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DAN	**471**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. May be repeated for credit. fee	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**472**	Concert Dance	Extensive preparation of repertory or new works created by experienced choreographers. Simulates dance company experience, culminating in performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**496**	Senior Dance Education Capstone	Original research that integrates dance and education. Includes production of written document and public presentation. Fall semester must be completed before spring registration. Must be repeated for a total of 4 semester hours.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DAN 350 with C or better; DAN 352 with C or better; DAN 354 with C or better; DAN 356 with C or better
DAN	**510**	Dance Production	Theory of costuming, lighting, makeup, scenery, and sound as related to dance performance. May be repeated once for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAN	**522**	Sound Design for Dance	Focus on digital recording/editing of audio compositions for choreographic and video projects. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1-2		Pre-requisite: Must have completed DAN 521 or be co-enrolled in DAN 521
DAN	**545**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement integration, observation, critical research, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**551**	Graduate Dance Pedagogy: Ballet	Advanced analysis of teaching techniques for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**564**	Solo and Group Choreography I	Original choreography created for solo and group performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must be a Graduate Student
DAN	**565**	Solo and Group Choreography II	Continuation of DAN 564.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Must have completed DAN 564

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DAN	**671**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3-4		Pre-requisites:Must be a Graduate Student
DCE	**100**	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**110**	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**111**	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**112**	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**113**	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**114**	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**116**	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**117**	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**118**	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**120**	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**121**	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**122**	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**123**	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**124**	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**125**	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**126**	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**130**	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major
DCE	**131**	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance student; DCE 130 with C or better
DCE	**134**	Technique and Theory of Modern Dance	Elementary concepts of modern dance technique. Development of movement quality and performance skills. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**135**	Technique and Theory of Ballet	Elementary ballet technique with emphasis on alignment, control, and development of the feet with proper awareness of style and phrasing. 4 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**160**	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**161**	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student; DCE 160 with C or better

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DCE	**170**	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance major
DCE	**171**	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance majors
DCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**201**	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**210**	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	**211**	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	**216**	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	**220**	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**221**	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**222**	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	**223**	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	**224**	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	**225**	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	**234**	Technique and Theory of Modern Dance	Intermediate concepts of modern dance technique. Development of movement quality and performance skills. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**235**	Technique and Theory of Ballet	Advanced study of elementary ballet technique through the traditional exercises, with proper awareness of style and phrasing. 4 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**262**	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**263**	Rhythmic Theory for Dance II	Continuation of DAN 221 with an emphasis on small group/movement projects in relation to musical time and structure. CD-ROM work included. Students with rhythmic theory transfer credit may meet the enrollment requirements by passing a proficiency exam. Please contact the instructor of the course for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**265**	Approaches to Choreography	Intermediate application of basic choreographic principles with emphasis on improvisation, form, content, and evaluative skills.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance majors only
DCE	**270**	Second-Year Seminar I	Theory and practice of lighting, scenery, sound, and stage management for dance production. Labs cover all areas of production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2-3		Pre-requisites: Dance students; DCE 170 or DAH 194: First-Year Seminar
DCE	**271**	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisites: Dance Majors Only
DCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**302**	Cross-Cultural Dance Studies	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	(L or HU) & G	Pre-reqs: DAH 201 or DCE 201 with C or better; ENG 101 and ENG 102 OR ENG 105 with C or better
DCE	**324**	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)

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DCE	**325**	Latin/Salsa III	Refines dances learned in the intermediate level of major Latin dances, including salsa, cha cha, rumba, meringue, bachata, and samba. Prepares students to have a more advanced command of the complex rhythms and figures used in the major Latin dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 225 or DAN 294 (Latin/Salsa II)
DCE	**334**	Technique and Theory of Modern Dance	Advanced concepts of modern dance technique. Development of movement quality and performance skills. 6 hours weekly. Placement audition required.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**335**	Technique and Theory of Ballet	Intermediate ballet technique with emphasis on strength, dynamics, rhythmical impulses, and transitions with awareness of proper style and phrasing. 4 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**340**	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	CS	Pre-requisite: ART 112 or Dance BFA, Dance Minor or BIS: Dance concentration student
DCE	**350**	Dance for the Classroom Teacher	Develops teaching methodology for implementation of dance curriculum in K-12 classrooms.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DCE	**354**	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**401**	Dance History	History of dance with a focus on Western forms from the Renaissance to contemporary times. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU	
DCE	**434**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance technique. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**437**	Dance Kinesiology	Principles of kinesiology applied to dance movement, including identification of muscular imbalances, inherited anatomical differences, and pathomechanics in dance technique.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance BFA student; BIO 201 with a D or better
DCE	**438**	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	**460**	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**461**	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance students; DCE 460 with C or better
DCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**492**	Honors Directed Study		N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DCE	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-7		
DCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**501**	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**534**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		Pre-requisite: Dance Graduate student
DCE	**535**	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**538**	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: MFA Dance student
DCE	**540**	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**543**	Sound Design for Dance	Audio mixing for analog/digital recording and editing. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	**554**	Graduate Dance Pedagogy	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		
DCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DCE	**634**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student
DCE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites:Must be a Graduate Student
DCI	**510**	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**511**	Establishing Effective Teaching Practice	Helps beginning teachers establish and strengthen best practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**512**	Developing Strategies for Teaching Practice	Helps beginning teachers refine management strategies and instructional methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**520**	Teaching Standards Applied to Professional Practice	Develops teacher skills and self-reflective practices to assess instruction and document and achieve professional growth in teaching standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**521**	Reflective Practice in Teaching Standards	Teachers apply reflective practices to develop professional presentation portfolios.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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DCI	**530**	Establish a Mentoring Partnership	Prepares veteran educators for mentoring. Mentors collaborate, reflect on their practice, and become teacher leaders through professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**531**	Analyzing and Planning for Professional Growth through Mentoring	Refines strategies for assessing instruction and provides collegial feedback.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: COE 501or DCI 510 with B or better
DCI	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**701**	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**702**	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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DCI	**703**	Research in Teacher Development and Leadership	Examines research in teacher education and development from preservice through in-service. Students participate in the review of research related to broad themes within the recent literature. Strands/themes of investigation include a brief review of the history of teacher education, teacher development, professional development and teacher leadership, teacher evaluation, qualitative and quantitative research in teacher education, reform in teacher education, including recent policies and politics and other issues.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**704**	Adult Learning Theory and Practice	Explores the multiple dimensions of learning in adulthood, including the social contexts of learning, and cognitive and developmental aspects of learning. Focuses on the experience and practice of adult learning, and examines the various theories attempting to explain how adults learn.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**705**	Teacher Leadership Theory and Professional Practice	Teacher leaders analyze leadership skills as they reflect on their own practice and professional development experience. They process knowledge of how to effectively promote positive practices among teachers at varied stages in their careers. Teacher leaders are involved in scholarly inquiry and discourse by means of leadership institutes, peer collaboration, reflective questioning and individual research. Teacher leaders also develop the perspective of the teacher as researcher as they read and critically evaluate published research related to teacher leadership in professional and academic literature.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
DCI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**451**	Design Research and Educational Gaming Practicum	Principles of design research as applied to educational games. Includes implementation of a design research project.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: RDG 440 with C or better; EDT 329 with C or better
DCI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
DCI	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
DCI	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student

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DCI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
DNP	**600**	Research Methods	Course on research methods in a specific discipline.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**601**	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**602**	Principles of Research Methods and Evidence-based Practice	Examines processes of scientific inquiry and their application to generating knowledge for and refining nursing practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**603**	Evaluating and Applying Evidence in Healthcare Outcomes	Examines the role of inquiry and innovation in scientific, theoretical, and practical underpinnings of healthcare improvement.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisite: Graduate Nursing Program student
DNP	**604**	Advanced Human Pathophysiology Core	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**605**	Advanced Health Assessment Core	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**607**	Advanced Human Pathophysiology Women's Health	Didactic course for women's health nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**608**	Advanced Pharmacotherapeutics Core	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate Nursing Program, Doctor of Advanced Nursing Practice. Co-enrolled in either: DNP 612, 622, 632, 642, or DNP 672
DNP	**609**	Advanced Practice Nursing Role I	First of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: Nursing Graduate Program
DNP	**610**	Advanced Practice Nursing Role II	Second of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP 609 with B or better
DNP	**611**	Advanced Health Assessment of Women Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of women across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
DNP	**612**	Applied Pharmacotherapeutics for Women	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for women.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 608
DNP	**613**	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	**614**	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	**615**	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	**616**	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	**617**	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	**618**	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	**620**	Advanced Human Pathophysiology Adult	Didactic course for adult nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 604
DNP	**621**	Advanced Health Assessment of Adults Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of adults and adolescents.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 605
DNP	**622**	Applied Pharmacotherapeutics for Adults/Geriatrics	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for adults and geriatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 608
DNP	**623**	Adult Health Promotion	Introduces adult health promotion and disease prevention, emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 624
DNP	**624**	Adult Health Practicum I	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 623

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DNP	**625**	Management of Common Problems in Adults	Includes theory/research that guides the management/maintenance of adults with chronic health alterations. Emphasizes psychophysiological interrelationships of illnesses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 626
DNP	**626**	Adult Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 625
DNP	**627**	Management of Complex Health Problems in Adults	Didactic course designed to complement DNP 628. Focus on application of EBP in care of adults with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requiste: DNP 628
DNP	**628**	Adult Health Practicum III	Clinical practicum designed to complement DNP 627. Focuses on application of EBP in care of adults with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 627
DNP	**630**	Advanced Human Pathophysiology Family	Didactic course for family nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 604
DNP	**631**	Advanced Health Assessment for Family Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 605
DNP	**632**	Applied Pharmacotherapeutics for the Family	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 608
DNP	**633**	Family Health Promotion in Primary Care I	First didactic role specialty course. Focuses on concepts and strategies to promote, manage, and maintain health of child, adult, and family.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	**634**	Family Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	**635**	Management of Common Family Problems in Primary Care II	Second didactic role specialty course utilizing knowledge from previous courses to formulate therapeutic promotion, management, and maintenance for individuals across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	**636**	Family Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	**640**	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 604
DNP	**641**	Advanced Health Assessment for Children Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of children from birth to age 21 years.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 605
DNP	**642**	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 608
DNP	**643**	Developmentally Based Care of the Well Child	Focuses on current practices, research, and issues related to health promotion and disease prevention for children and adolescents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	**644**	Well Child Advanced Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	**645**	Management of Common Problems in Pediatric Primary Care	Focuses on concepts, theories, and research as a basis for strategies related to management of illness and health maintenance for children.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	**646**	Advanced Practicum II in Pediatric Primary Care	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645
DNP	**650**	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 604
DNP	**651**	Advanced Health Assessment of Neonates Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 605
DNP	**653**	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	**654**	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	**655**	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	**656**	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655

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DNP	**659**	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	**660**	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiolgy and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**662**	Advanced Mental Health Assessment Across the Lifespan Lab/Practicum	Focuses on integration of knowledge and development of skills in assessment of psychiatric disorders occurring in children, adolescents, and adults.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		
DNP	**663**	Mental Health Promotion in Adults	Analyzes issues, theories, and research in restoration and promotion of mental health. Emphasizes developing conceptual framework for psychiatric nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 664
DNP	**664**	Adult Psychiatric Mental Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 663
DNP	**665**	Management of Common Mental Health Problems in Adults	Focuses on development of theoretical basis for intervention and a knowledge base for collaboration and consultation in the mental health area.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Corequisite: DNP 666
DNP	**666**	Adult Psychiatric Mental Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 665
DNP	**667**	Management of Complex and Chronic Mental Health Problems in Adults	Focuses on modalities of evidence-based treatment with adolescents and adults with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 668
DNP	**668**	Psychiatric Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic adolescent and adult mental health disorders.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 667
DNP	**671**	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**672**	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications as a treatment for children and adolescents with mental health disorders.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**673**	Mental Health Promotion in Children, Adolescents, Adults, and Families Across the Lifespan	Focuses on evidence-based interventions to promote the mental health of children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Child and Family Psychology Nurse Practioner), (Child & Adolescent Mental Health) or Child and Family Mental Heath Nurse Practioner; DNP 671; DNP 672; Co-requisite: DNP 674
DNP	**674**	Child and Family Mental Health Practicum II	Clinical experiences to become skilled in assessment and evidence-based individual psychotherapy of common mental health disorders in children, adolescents, adults and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 671; DNP 672; Co-requisite: DNP 673
DNP	**675**	Management of Common Mental Health Disorders in Children, Adolescents and Adults	Emphasizes the assessment and evidence-based management of common mental health disorders in children, adolescents, and adult family members.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Child/ Family Psychiatric Mental Health student
DNP	**676**	Child and Family Mental Health Practicum I	Clinical experiences to become skilled in assessment and evidence-based management of common mental health disorders in children, adolescents, and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Prerequisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; Co requisite: DNP 675
DNP	**677**	Management of Complex and Chronic Mental Health Disorders in Children, Adolescents, and Families	Focuses on modalities of evidence-based treatment with children, adolescents, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**678**	Child and Family Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 674; DNP 676;Co-requisite: DNP 677
DNP	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
DNP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
DNP	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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DNP	**685**	Geriatric Health Promotion Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
DNP	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Nursing and Healthcare Innovation PhD or DNP student. Pre/Co-requisite: DNP 682 or NUR 682. credit is allowed for only DNP or NUR 686
DNP	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
DNP	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**696**	Advanced Human Pathophysiology Older Adults	Didactic course for gerontological/geriatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**704**	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student
DNP	**705**	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	**708**	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**709**	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**711**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**712**	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DSC	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
DSC	**101**	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
DSC	**180**	Athena Design Success	Facilitates academic success for first-year College of Design students in the Athena program through developmental, educational, and professional experiences.	N	DIS	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
DSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**236**	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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DSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
DSC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
DSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
DSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	**501**	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**520**	Contemporary Design Issues	Projected applications in design production, planning, and decision-making processes.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**525**	Design Methodologies	Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Fee.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**558**	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design student
DSC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student

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DSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
EA	**555**	Sch-Plant-Plan-Main		Y	LEC	Y	CNV	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
EAC	**426**	Professional Knowledge in Early Childhood Education	Explores issues related to professional knowledge, including disciplinary instruction and the impact of the community on students¿ learning.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
EAC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
ECD	**501**	Interprofessional and Family Collaboration	Explores trends and practices, educationally appropriate instruction and resource materials, methods and strategies in early childhood education. Discusses history of the field, theory, contemporary issues and controversies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**505**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**520**	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**522**	Developmental Social Experiences in Early Childhood Education	Materials, techniques, aesthetic expression, creative activities, and values in the integrated curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**527**	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECD	**544**	Play-Based Education in Inclusive Settings	Theories of play and the educational implications of each in an early childhood/elementary inclusive curriculum for best teaching practices. Practical applications for the primary grades of the elementary and preschool setting in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**548**	Childhood Studies and Social and Political Environments	Examines the emergence of interdisciplinary/transdisciplinary childhood studies from historical, social, and political contexts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**549**	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**555**	Contemporary Practices in Early Childhood	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**565**	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
ECD	**571**	Pre-K Student Teaching	Supervised field experience consisting of 160 total hours of work with children between the ages of birth to age 4.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	4.		Pre-requisites: Graduate students only
ECD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**601**	Theories and Issues in Early Childhood Education	Current theories and issues in early childhood education. Presents issues of early childhood best practices, policy, theory, research, and evaluation that are of significance to the early childhood professional. Highlights building on the child development conceptual framework as related to theory and practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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ECD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
ECD	**733**	Social and Emotional Development	Inquiry into the social and emotional development dynamics in children, such as peer relationships, self-concept, and parenting processes, with implications for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**503**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**541**	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth throught eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECD	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children's diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**555-W**	Modern Practices in Early Childhood Education	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**570**	Pre-K Internship	Field experience consisting of 30 total hours of work with children between the ages of birth-age 4. Required for Arizona Dept. of Education Early Childhood Endorsement.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**578**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECD	**210**	The Developing Child: Theory into Practice: Birth-Pre-K	Organizing, planning, and implementing developmentally appropriate educational practices to provide optimal learning environments for children, birth-pre-K.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
ECD	**211**	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork. May be repeated once for credit.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
ECD	**214**	The Developing Child: Theory into Practice: K-3	Examines all aspects of development of children, kindergarten through age eight, with implications for teachers and parents. Requires classroom observation and participation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
ECD	**220**	Nutrition, Health, and Safety for Young Children	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Students are required to have first aid and CPR certification, which may require a fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
ECD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**301**	Technology, Media, and Community-Based Education for Young Children	Examines technology, media, toys, and community-based educational opportunities to support the education of three- to eight-year-old children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**302**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**312**	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**313**	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**315**	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**316**	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**321**	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

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ECD	**323**	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**324**	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**341**	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**355**	Accommodating Instruction in Early Childhood Education	Identifying and accommodating learners with special needs, including classroom adaptations in instruction and assessment, for pre-K-3 classroom environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**396**	Field Experience: Community-Based Early Childhood Education Setting	Observation in classrooms and individual and small group instruction. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**397**	Field Experience II	Instruction, observation, and management of small groups and the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**402**	Integrated Curriculum and Assessment: Math and Science	Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade, within an integrated curriculum approach.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**403**	Educational Environments: Preschool/Kindergarten/Primary Grades	Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**405**	Practicum in Teaching Reading and Language Arts in Early Childhood	Supervised experience teaching reading and language arts at the preschool, kindergarten, and primary-grade (1-3) levels. Developmentally appropriate strategies to promote young children's speaking, listening, reading, and writing abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**406**	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**410**	Science Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood science; age-appropriate standards; active investigation of science concepts; inquiry and collaborative learning; connections between science and other subject areas. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**412**	Early Math:Development/Instruction/Assessment	Content, instructional strategies, and assessment in early childhood mathematics; age-appropriate standards; active investigation of mathematics concepts and ideas; connections between mathematics and other subject areas.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**413**	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**414**	Interprofessional Practicum	Investigates services and agencies available in the local community to parents of children with special needs. Practical experiences with an intermittent seminar format. Dispositions, knowledge, experiences, and skills necessary for interprofessional collaboration across multiple agencies and programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**415**	Practicum - Literacy Curriculum, Instruction, and Assessment, K-3	Supervised experience teaching reading and language arts in the primary grades.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**470**	Early Childhood Education Student Teaching Seminar	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**476**	Integrated Curriculum: Birth-Pre K	Introduction to teaching children birth through pre-K, including classroom organization, curriculum, and professional relationships.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**477**	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	4-6		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**478**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	5-8		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**479**	Capstone Seminar in Early Childhood Education	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	**481**	Issues and Practices in Early Childhood Education	Stakeholder analysis of teacher education experiences applicable to preparation that leads to increased educational opportunity and success for diverse children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**493**	Honors Thesis	Honors Thesis	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
ECD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
ECD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECE	**330**	electrical Networks		N	LEC	N	CNV	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	4.		
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
ECN	**201**	Economic Issues and Analysis	Introduces tools used in basic economic analyses, emphasizing application to contemporary national and international issues. Not open to students with credit in ECN 211 or 212	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisite: Not open to students with credit in ECN 211, ECN 212, 213, or ECN 214
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**213**	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Co- or Pre-requisite: One of the following courses: MAT 210, MAT 211, MAT 270 or MAT 271.
ECN	**214**	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or greater or be currently enrolled: MAT 210, MAT 211, MAT 270 or MAT 271
ECN	**221**	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: MAT 211 or MAT 271 with a C or better or currently enrolled
ECN	**231**	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must be an Honors student; Must have completed MAT 211 or MAT 271 with a grade of C or greater or be currently enrolled.
ECN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be an Honors Student; Must have completed one of the following courses with a grade of C or greater or co-enrolling: MAT 210, MAT 211, MAT 270, MAT 271 or MAT 272
ECN	**303**	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	**306**	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled. May not enroll if completed IBS 306 with a D or greater
ECN	**312**	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**313**	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	**315**	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**331**	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**335**	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre- or corequisites with grade of "C" or better: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271.
ECN	**345**	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with grade of C or better.
ECN	**360**	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**365**	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**382**	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	**384**	Economics of Social Behavior	Applies economic analysis to contemporary behavior; discrimination, work versus leisure, crime, medical care, macroeconomic policies. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must have minimum cumulative GPA of 2.00; Must have minimum of 56 total earned hours or be a non-degree seeking student OR any Graduate degree seeking student
ECN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**404**	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**410**	Applied Business Forecasting	Applies forecasting techniques in business and institutional environments. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 221 or STP 226, AND ECN 214 or ECN 312/314 with a grade of C or greater.
ECN	**413**	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**414**	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**416**	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**421**	Earnings and Employment	Origins of labor movement, analysis of labor unions, labor markets, collective bargaining, and current policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**425**	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314, AND ECN 221, ECN 231 or STP 226 with a grade of C or greater
ECN	**436**	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**438**	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 213 or ECN 313 with a grade of C or greater or be currently enrolled
ECN	**441**	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**445**	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 213 or 313; ECN 214 or 312 or 314; MAT 211 or 271 with grade of C or better.
ECN	**450**	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**453**	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**470**	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**475**	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	L	Pre-reqs: ECN 213 or 313 AND ECN 214 or ECN 312/314 with C or greater; senior standing.
ECN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Min 3.0 ASU cum GPA; ECN 213 or 313, and ECN 214 or 312/314 with a grade of C or greater.
ECN	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: Must have completed ECN 313and ECN 314 with a grade of C or greater or be currently enrolled
ECN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**501**	Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		
ECN	**502**	Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	**503**	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a MBA degree program student
ECN	**504**	History of Economic Thought	Historical development of economic theory. Emphasizes the development of economic analysis from preclassical economics through Keynes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**509**	Macroeconomic Theory and Applications	Theory of income, output, employment, and price level. Influence on business and economic environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**510**	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**525**	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:MAT 210 with a grade of D or better or currently enrolled
ECN	**527**	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**530**	Experimental Design	Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate Students only (degree and non-degree seeking)
ECN	**535**	Multivariate Methods	Advanced statistical methods used in business research. Multivariate analysis of association and interdependence.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**540**	Forecasting	Foundation of statistical forecasts and forecast intervals; applies classical and computer-assisted forecasting methods to business forecasting problems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites:QBA 502, MAT 210 completed with a D or better, or currently enrolled
ECN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		

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ECN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 712 and ECN 714 with a grade greater than a C
ECN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**711**	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**712**	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**713**	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**714**	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**715**	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 with a grade of C or greater; Must have completed ECN 713 with a grade greater than a C
ECN	**716**	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 714 with a grade of C or greater; Must have completed ECN 712 with a grade greater than a C
ECN	**717**	International Macroeconomics	Intertemproal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
ECN	**721**	Labor Economics	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**722**	The Aggregate Labor Market	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**725**	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**726**	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 725 with a grade better than a C
ECN	**727**	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater;
ECN	**736**	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**738**	International Finance	Foreign exchange market, balance of payments, and international financial institutions and arrangements; theory and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**741**	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: W.P. Carey Graduate degree-seeking students only; Must have completed ECN 712 with a grade of B or greater; Co-requisite: ECN 714
ECN	**753**	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**760**	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 and ECN 712 with a grade greater than a C; Co-requisites: ECN 713 and ECN 714
ECN	**770**	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics: nonlinear programming, the Kuhn-Tucker theorem, concave programming, optimization over time.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**784**	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
ECN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
ECT	**414**	Social/Educational Policies Young Children/Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECT	**479**	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECT	**496**	Field Experience III	Instruction and management of small groups and substantial work with the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**511**	School Law	Constitutional, statutory, and case law that relates to all school personnel, pupils, the school district, and other governmental units. Contracts, dismissals, tenure, retirement, pupil injuries, liability of personnel and district, school district boundary changes, and bonding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**515**	Administration and Technology in Learning	Provides students with hands-on exposure to technology that assists with school improvement initiatives.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**525**	Human Relations and Societal Factors in Education	Interrelations between problems of educational administration and interdisciplinary social sciences. Communications skills, morale, authority, and perception. Concepts from political science, economics, and social-psychology useful to the administrator.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**534**	Concepts of Learner-Centered Leadership	Principles, theories, attributes, and skills related to learner-centered leadership.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**548**	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**555**	Educational Facility Planning	School building needs, educational planning for facilities, responsibilities of architects, duties of contractors, and equipping and furnishing of school buildings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**571**	School Business Management	Purchasing, budgeting, accounting, payroll management, auditing, financial reporting, insurance, and administration of nonteaching personnel and services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**573**	Human Resources Administration	Organization for human resources services; development of policy to govern the human resources function and its related processes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**576**	The School Principalship	Problem and lab approaches used to provide application of administrative activities of elementary and secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**611**	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**624**	Organizational Development and Management of Schools	Current organizational patterns for public schools. Emphasizes the organizations, human, and social dimensions on organizations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**645**	Leadership Development for Education Leaders	Principles, theories, attributes, and skills related to individual leadership development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**675**	Politics of Education	Uses social science theory and research to consider the political context of educational policy making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**676**	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**679**	Administration of Special Programs in Education	For personnel administering special educational services; responsibilities of superintendents, principals, supervisors, and directors for special education, student personnel, audiovisual, library science, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		
EDA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**711**	Administrative Leadership	Emphasizes research in leadership; application of research findings to administrative and supervisory functions in educational endeavors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**722**	Administration of Instructional Improvement	Recent research relating to administrative and supervisory responsibilities for the improvement of the educational program. Effective processes by administrators, supervisors, consultants, and coordinators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**723**	Diversity in Education for School Leaders	Discusses current issues and leadership strategies for meeting the needs of diverse student populations combating inequity and inequality in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EDA	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		

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EDA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-3		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		
EDA	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**512**	Critical Issues in Educational Leadership	Legal and ethical concepts of educational practices in federal and state laws affecting charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**514**	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**521**	Evaluation of Teaching Performance	In-depth analysis of legal basis of teacher appraisal, teacher competency, measurement of teacher performance, and application of performance appraisal systems.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**524**	Theory and Application of Educational Administration	History and development of public school administration in the United States; current organizational patterns for public education at local, intermediate, state, and national levels; current theoretical positions in educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**547**	Marketing and Community Relations for Educational Entrepreneurs	Strategic marketing and community relations concepts and their application, formulation, and execution in charter and independent schools and related services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**556**	Management and Human Resources for Educational Entrepreneurs	Entrepreneurial leadership and organization theory applied to managing human resources in competitive educational organizations by increasing the effectiveness of decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**557**	Facilities Planning for Educational Entrepreneurs	Legal and practical implications involved in designing or refurbishing charter school facilities to maximize space to facilitate student development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**558**	Financial Planning and Reporting for Educational Entrepreneurs	Financial planning and reporting concepts, requirements, and procedures for charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**572**	School-Site Business and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**576-W**	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**634**	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**772**	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**773**	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDC	**420**	Integrated Learning Experience III: Assessment	Principles related to classroom assessment, including the alignment of assessment to curriculum, test interpretation, and a variety of assessment techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**425**	Integrated Learning Experience IV: Advanced Management and Professional Knowledge	Explores issues related to professional knowledge, including interdisciplinary instruction, management, and the impact of the community on students' learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**430**	Literacy III: Interventions	Strategies for accommodating students struggling with learning, with a focus on the areas of literacy acquisition and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**440**	Science Methods for the Elementary Classroom	Developmentally appropriate practices for teaching and assessing sciences in grades K-8. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**450**	Social Studies Methods for the Elementary Classroom	Developmentally appropriate practices for teaching and assessing social studies in grades K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	Institute & Grad Sch Education	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**302**	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDP	**303**	Human Development	Selected aspects of child and adolescent development. Emphasizes possibilities for influence by teachers and parents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
EDP	**310**	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	SB	
EDP	**313**	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
EDP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**454**	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
EDP	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
EDP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDP	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**510**	Essentials of Classroom Learning	Theoretical and empirical foundations of learning in the classroom milieu. Critical exposure to research and method in instructional psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**513**	Child Development	Examines problems and achievements experienced by children growing up in a technological society. Emphasizes discovering the child's perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**514**	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**530**	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**535**	Applied Behavior Analysis	Principles of conditioning as applied to behavior. Current research on the experimental analysis of behavior in educational psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**536**	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**540**	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**541**	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
EDP	**542**	Research Methods in the Learning Sciences	Students read, design, and carry out original research in the learning sciences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be a Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student and completion of EDP 540 with a grade of C or better
EDP	**544**	Psychology of Reading	Alternate analyses of the reading process; designs and procedures for investigating instructional and noninstructional variables related to reading achievement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**545**	Higher-Order Processes in the Learning Sciences	Examines original research on induction, deduction, analogy and transfer, knowledge representation, and other issues in learning.	N	DIS	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
EDP	**550**	Introduction to Measurement in Education	Nature and types of educational measures. Critiquing and selecting appropriate measuring devices. Constructing measuring devices. Social controversies about tests.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**552**	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**554**	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**560**	Individual Intellectual Assessment	Issues in administration and interpretation of individual intelligence tests. Theoretical basis, ethical considerations, and diagnostic use of test results. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: School Psychology Ph.D or Counseling Psychology Ph.D
EDP	**561**	Lab in Psychological Assessment	Lab experience in administration, scoring, and interpretation of individual intelligence tests.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Co-enrolled in EDP 560
EDP	**562**	School Psychology: Ethics, Theory, and Practice	Provides information regarding the ethics, history, and theory of current school psychology practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**563**	Interventions in School Psychology	Examines case-based consultation and consultation research relevant to school psychology practice.	N	FLD	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only

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EDP	**564**	Academic Interventions	Skills-building course emphasizing academic interventions and outcome-based educational decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
EDP	**566**	Diagnosis of Learning Difficulties	Clinical diagnosis of learning difficulties, emphasizing specific academic problems. Use and interpretation of diagnostic instruments in practical school situations. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDP 560 and 562 with a grade of B or better
EDP	**567**	School Psychological Services to Minority Students	Historical perspectives and major issues in psychological and academic assessment and interventions with minority school children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**568**	Diagnosis and Interventions for Children and Adolescents with Emotional Handicaps	Clinical diagnosis of emotional handicaps in children and adolescents with emphasis on interpretation of diagnostic instruments and designing appropriate interventions in school settings. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
EDP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**651**	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of COE 503 with a grade of C or better
EDP	**652**	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**654**	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**311**	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
EDP	**323**	Professional Development, Learning, and Motivation	Applies educational psychology principles in classrooms; strategies for building classroom community; learner-centered and intentional teaching; and proactive professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
EDT	**321**	Computer Literacy	Surveys the role of computers in business, industry, education, and personal life. Lab experience with word processing, spreadsheet, and presentation software as well as Internet research and the creation of a personal Web site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDT	**323**	Computer Applications	Introduces database design principles using Microsoft Access and general programming concepts using the Visual Basic.Net programming language.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	Pre-requisites: EDT 321 or CSE 180 or any ACO, CIS, CSE, or CST course with a D or better or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	**329**	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**405**	Presentation Technology for Multimedia	Explores multimedia hardware and software used in creating presentations for educational, corporate, and commercial applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**406**	Computer Graphics and Animation	Study and application of design and animation techniques for use in video or computer-based presentations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**455**	Authoring Tools	Use of current authoring tools to design and deliver computer-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDT	**501**	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**502**	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**503**	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**504**	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**505**	Multimedia Presentation Techs	Explores the design of multimedia presentations and the utilization of tools and resources to effectively deliver those presentations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**506**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**507**	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: EDT 501 with B or better
EDT	**511**	Technology Applications in Education	Integrates and evaluates emerging technologies into K-12 and adult teaching and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**520**	Educational Technology and Training	Applies educational technology to training and human performance systems in business, industry, and government; emphasizes trends and project management.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 with a grade of C or better
EDT	**523**	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**525**	Web Resources for Educators	Explores Web-based and distance learning applications for educators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**527**	Instructional Video Production	Design and production of instructional video.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 503 with a grade of C or better
EDT	**528**	Development of Web-Based Instruction	Design and development of online instruction using advanced technologies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**530**	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	**531**	Hypermedia	Design, development, and evaluation of open-ended, nonlinear computer-based tools and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 455 with a grade of C or better
EDT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, 502, and EDT 503 with a grade of C or better
EDT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, EDT 502, and EDT 503 with a grade of C or better
EDT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**594**	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Students who have credit for RDG 634, may not enroll in EDT 634
EDT	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDT	**701**	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 and 502 with a grade of C or better
EDT	**702**	Research in Technology-Based Education	Critical exposure to theories, research, and methods in technology-based education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**703**	Research in Distance Education	Seminar with emphasis on research in telecommunications and distance education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: EDT 523 with a grade of C or better
EDT	**704**	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
EDT	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completed EDT 501, EDT 502, and EDT 503 with a C or better

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EDT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Completion of EDT 701 with a grade of C or better
EDT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**545**	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**546**	Using Technologies for Presentations	Students create presentations appropriate for educational settings and electronic portfolios on CD-ROMs using scanners, digital/video cameras, and multimedia software. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**547**	Technology in Language Arts and Social Studies Education	Examines numerous ways technology is used to enhance teaching and learning in language arts and social studies classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**548**	Technology in Mathematics and Science Education	Examines numerous ways technology is used to enhance teaching and learning in mathematics and science classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**549**	Using the Internet and Case Studies to Solve Educational Problems	Provides a model of the use of distance education technologies.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**555**	Advanced Web Site Design and Development	Prepares technology leaders to design and create interactive school and district Web sites.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**556**	Managing School Information Systems	Applied course based on constructivist theory that examines the techniques and strategies of networking information systems within educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**575**	Critical Issues in Technology	Exploration and critical analysis of theoretical issues related to using technology in education. Students do literature reviews for EDT 593.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**180**	Computer Literacy	Introduces personal computer operations and their place in society. Problem-solving approaches using databases, spreadsheets, and word processing. Credit is allowed for only EDT 180 or 321.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	CS	Students may not sign up for EDT 180 who have received a C or better in EDT 321.
EED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**511**	Principles of Curriculum Development	Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of conceiving and effecting change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**526**	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**529**	Science in the Elementary School	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**530**	Outdoor/Environmental Education	Use of various outdoor settings as laboratories for classroom-related experience, study, observation, inquiry, research, and recreation. Includes strategies and materials for developing environmental literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
EED	**537**	Mathematics in the Elementary School	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**538**	Teaching Social Studies with Literature	Develops the rationale, resources, and strategies for adopting a literature-based approach to social studies teaching in grades K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**581**	Diagnostic Practices in Mathematics	Specific skills in diagnosing and treating children's learning difficulties in mathematics. Includes practicum experiences, both on and off campus, in identifying strengths and weaknesses and initial remediation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**720**	Language in Education	Sociolinguistic seminar on language issues in education, including language acquisition, classroom interaction, language attitudes, relation language, and class-gender ethnicity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**730**	Discourse Analysis in Education	Surveys issues in and approaches to discourse analysis in educational research, with focus on students' projects using discourse analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**521**	Instructional Planning and Management in the Inclusive Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**531**	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**576**	Field Experience	Applies course content in elementary classrooms: observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**578**	Student Teaching in the Elementary School	Student teaching in elementary education setting for students in the MEd with Concentration in Teacher Certification.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**579**	Apprentice Teaching in Elementary Education	Apprentice teaching in elementary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
EED	**324**	Social Studies in Elementary Schools	Social studies education standards, curriculum, and instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program

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EED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**397**	Field Experience II	Observation, instruction, and management of small groups and the whole class. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**411**	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**412**	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**414**	Elementary School Curriculum and Organization	Rationales for instructional curricula; alternative curriculum designs and broad-based content; selected topics in school governance, finance, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Co-requisites: Elem Ed student, EED 411, EED 412, RDG 413 and EED 496 OR PDS (Professional Development School) student
EED	**433**	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management, and assessment practices. Lecture, discussion, lab.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**464**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**478**	Student Teaching in the Elementary School	Student teaching in elementary school classrooms, Synthesized experience in curriculum, instruction, and classroom management	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**479**	Capstone Seminar in Elementary Education	Reflective, experienced-based integration of theory and practice; professional development for K-8 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**492**	Honors Directed Study	Honors Directed Study	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Must be an Honors student
EED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisite: Must be an Honors student
EED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**496**	Field Experience III	Applies course content in a K?8 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7	L	Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EEE	**101**	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	2.		
EEE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		
EEE	**202**	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: EE student with Intro to ES; Pre/Co-requisite: PHY 131 and MAT 274 or 275 (with C or better if completed) OR Non-EE student with any Intro to Engr, Pre/Co-requisite: PHY 131 and MAT 274 or 275
EEE	**203**	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in EEE 202 (or currently enrolled) or EEE 302 AND a grade of C or better in MAT 242, 342 or 343 or be co-enrolled in MAT 242, 342 or 343.
EEE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in CSE 100 or CSE 110 or CSE 200 AND a grade of D or better in CSE 120 or EEE 120.

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EEE	**241**	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: MAT 362 and PHY 131 with C or better or currently enrolled; ECE 201 with D or better OR MAT 267 or 272 and MAT 274 or 275 and PHY 131 with C or better or currently enrolled; EEE 202 with D or better or currently enrolled
EEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**304**	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a grade of D or better or be currently enrolled in EEE 203
EEE	**333**	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND grade of D or better in CSE101,ECE100,200,EEE101 AND grade of D or better in CSE120 or EEE120 or be currently enrolled.
EEE	**334**	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student and a grade of D or better in ECE201 or EEE202
EEE	**335**	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Gate sizing, timing analysis, sequential digital circuits. Amplifiers, multi-stage op-amps, A/D, D/A converters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; Must have completed EEE 334 or ECE 334 with a grade of D or better or be currently enrolled in EEE 334
EEE	**341**	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE student; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203; EEE 241 completed with D or better (or MAT 362 completed with a grade of C or better) or currently enrolled in EEE 241
EEE	**350**	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203, EEE 303 or MAE 317 completed with a D or greater or currently enrolled in EEE 203 or MAE 317 or co-enrolling in EEE 203 OR Graduate Engineering students
EEE	**352**	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE students; MAT 362 with C or better or EEE 241 with a D or better or currently enrolled; PHY 241 or 361 with a C or greater or currently enrolled; CHM 114, 115, 116 or 118 with a D or greater or currently enrolled
EEE	**360**	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student; EEE 202 or ECE 201 completed with a D or better or currently enrolled in EEE 202; EEE 241 completed with a D or better or currently enrolled OR Graduate Engineering student
EEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**404**	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 (or EEE 303) with D or better; EEE 230 (or CSE 230, EEE 225 or EEE 226) with D or better
EEE	**407**	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a D or greater or currently enrolled in EEE 203; MAT 342 or 343 completed with a C or greater or currently enrolled
EEE	**425**	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or better or currently enrolled
EEE	**433**	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or greater or currently enrolled
EEE	**434**	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 241 or EEE 340 completed with a grade of D or better or currently enrolled in EEE 241; EEE 352 or ECE 352 completed with a grade of D or better or currently enrolled in EEE 352
EEE	**435**	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Must be an Engineering BS/BSE student AND earn a grade of D or better in EEE 436 or be co-enrolled in EEE 436.
EEE	**436**	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 352 or ECE 352.
EEE	**437**	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 436 with D or better

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EEE	**439**	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 435.
EEE	**443**	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 341 with D or better
EEE	**445**	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**448**	Fiber Optics	Principles of fiber-optic communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**455**	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE; EEE 350 completed with a D or better or currently enrolled; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203
EEE	**459**	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE and a grade of D or better in EEE 202 or 203.
EEE	**460**	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in PHY241, 294 or 361 OR a grade of D or better in CHM114, 115 or 116 and a grade of C or better in MAT 274 or 275 and a grade of C or better in PHY241 or 361.
EEE	**463**	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; CHM 114 or CHM 116 with D or better or currently enrolled; MAT 274 or MAT 275 with C or better or currently enrolled; MAE 240 (or ECE 340) with D or better or PHY 241 with C or better or currently enrolled
EEE	**470**	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**471**	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**472**	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisite: BS/BSE Engineering Students; EEE 203
EEE	**473**	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**480**	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in EEE203 or MAE318 or be currently enrolled.
EEE	**481**	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203 and EEE 230 (or CSE 230) with D or better or only MAE 318 with D or better
EEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**488**	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE student; ENG 102 (or 105 or 108), EEE 241, EEE 350, EEE 334, and 4 courses from EEE 304, 333, 335, 341, 352 or 360, all with D or better
EEE	**489**	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE students; EEE 488 with D or better or be currently enrolled. Seniors or PostBacc undergraduates only.
EEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-6		Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	0-6	L	Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering BS/BSE student and a grade of D or better in EEE 433.
EEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-7		Pre-requisites: Engineering BS/BSE students only.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		Pre-requisites: Senior Electrical Engineering BSE students only.
EEE	**505**	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students only.
EEE	**506**	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**507**	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**508**	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**509**	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**510**	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**511**	Artificial Neural Computation Systems	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in CHE 518, MSE 518, or MSE 475 you may not enroll in EEE 518
EEE	**523**	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**524**	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**525**	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**526**	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**527**	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG/MS/MSE/PHD/MCS students OR Science & Engr Of Materials students AND a grade of C or better in EEE 523.
EEE	**530**	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**531**	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**532**	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or be currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**533**	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**534**	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**535**	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**536**	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**537**	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**538**	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**539**	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**540**	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**541**	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**543**	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**544**	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**545**	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**546**	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**547**	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**548**	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**549**	Lasers	Theory and design of gas, solid, and semiconductor lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**550**	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**551**	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**552**	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**553**	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**554**	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**555**	Modeling and Performance Analysis	Modeling and performance analysis of stochastic systems and processes such as network traffic queueing systems and communication channels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**556**	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**557**	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**558**	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**562**	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		

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EEE	**563**	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**564**	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**571**	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**572**	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**573**	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**574**	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**575**	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate Engineering student
EEE	**577**	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**579**	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**581**	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**582**	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**585**	Digital Control Systems	Analysis and design of digital and sampled data control systems, including sampling theory, z-transforms, the state transition method, stability, design, and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**586**	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**587**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**588**	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Master of Engineering or Electrical Engineering MS/MSE/PHD students
EEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students, or Nuclear Power Generation Certificate

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EEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**606**	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**607**	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**625**	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**627**	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**631**	Heterojunctions and Superlattices	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**641**	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**643**	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**647**	Microwave Solid-State Circuit Design II	Practical design of microwave free-running and voltage-controlled oscillators using Gunn and Impatt diodes and transistors; analysis of noise characteristics of the oscillator.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**686**	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, Electrical Engineering MS/MSE/PHD students
EEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		

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EEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**731**	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Electrical Engineering PhD students
EEE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EEE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**301**	Electric Circuit Analysis II	Analysis of continuous-time signals and linear systems of using Laplace and Fourier response of circuits.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; EET 208 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**304**	Transmission Lines in Computer Networks	Theory and application of transmission lines in high-speed computer networks. Signal propagation and impedance matching.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		
EET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**396**	Professional Orientation	Technical, professional, economic, and ethical aspects of electronics/computer engineering technology practice and industrial organization.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
EET	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; MAT 262 or MAT 272 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**403**	PLCs, Sensors and Actuators	Applications, programming, and troubleshooting using PLCs. Interfacing to motors, sensors, and actuators. Fluid power principles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**406**	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3-4		Pre-requisites: EST 310 and MAT 267(or MAT 272). If you have credit for EET 506, you may not enroll in EET 406

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EET	**407**	Energy Conversion and Applications	Electricity, magnetism, mechanics, heat and units, and three-phase circuits. Electrical machines, transformers, generation, transmission, and distribution of electrical energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Must be Tech Sci or Engr BS/BSE/NonDegree AND Univ Cum GPA is 2.25 or greater AND must have earned D or greater in EET 208 or currently enrolled OR must be Tech Sci or Engr NonDegree, Tech Sci BAS/MS/MSTECH or Master Computing Studies
EET	**410**	Electronic Circuits II	Analysis and design of OP-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; EET 301 and EET 310 with D or better OR Technology and Innovation or Fulton Engineering graduate student or TS/ES non-degree student
EET	**430**	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Students who have credit for EET 530, may not enroll in EET 430
EET	**460**	Power Electronics	Analyzes circuits for control and conversion of electrical power and energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: EST 310
EET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**506**	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate status. If you have credit for EET 406, you may not enroll in EET 506
EET	**508**	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**530**	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Students who have credit for EET 430, may not enroll in EET 530
EET	**560**	Industrial Electronics and Applications	Analysis, design, and application of special electronic devices and systems to industrial control, power, communications, and processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**578**	Digital Filter Hardware Design	Hardware design of FIR and IIR filters, including adaptive filters, based on DSP chips. Develop new applications using DSP microprocessor systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**579**	Digital Image Communication	Image capture, transform, compression, storage, and transmission. Provides computer environment (software and hardware) to emphasize the practical aspect.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EGR	**101**	Introduction to Engineering Design I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
EGR	**102**	Introduction to Engineering Design II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: EGR 101 and MAT 170; Pre or Co-requisite: ENG 101 (or ENG 105, 107 or 111)
EGR	**126**	Engineering Applications of MATLAB	Using MATLAB to solve engineering problems; problem solving; computational and programming uses of MATLAB.	N	STO	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 with D or better
EGR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**201**	Fall Multidisciplinary Project	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**202**	Spring Multidisciplinary Project	Design, problem solving, and engineering practice developed in a multidisciplinary project setting. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**220**	Computer Hardware for Engineers	Computer architecture, types of memory, operating systems and interrupts, buses and multiplexing, error detection and correction, Internet, the Web, encryption.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**221**	Engineering Mechanics: Statics	Introduces the concepts of force, moment, and their relationships to the static equilibrium of a physical object.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**222**	Mechanics of Materials	Behavior of solid bodies subjected to loading. Stresses, strains, and displacements in bodies Analysis and design in solid mechanics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**223**	Engineering Thermodynamics	Heat; conservation of energy; first and second laws of thermodynamics; open and closed systems; entropy, enthalpy, and internal energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and CHM 113
EGR	**224**	Engineering Materials Selection	Methods of selecting materials for specific applications based on mechanical loading, electrical, thermal, and environmental constraints.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102 and PHY 121

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EGR	**225**	Instrumentation I	Introduces instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher; EGR 102
EGR	**226**	Engineering Applications of LabView	Uses LabView to solve engineering problems; problem solving, data acquisition, and control using LabView.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**227**	Manufacturing Processes I	Overview of manufacturing processes, including operating principles, process selection, and production economics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102
EGR	**229**	Engineering Ethics and Professionalism	Case studies in engineering ethics and professionalism.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 101 and ENG 101
EGR	**230**	Fluid Mechanics	Fluid properties, fluid statics, fluid continuum systems, control volumes, boundary control surfaces, energy and momentum, hydraulics, pipes, open channels, turbomachines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221
EGR	**231**	Engineering Mechanics: Dynamics	Rectilinear and planar motions of a particle and their relationships to the forces on it.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**234**	Structure and Properties of Engineering Materials	Relationships among material structure, processing, and properties. Mechanical, electrical, and magnetic properties. Corrosion.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: CHM 113; MAT 170 or higher
EGR	**235**	Instrumentation II	Frequency domain analysis of instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 225 and APM 265 (or APM 270, or MAT 265, or MAT 270)
EGR	**238**	Feedback Control	Introduces modeling, analysis, and design of feedback control systems, including block diagrams, transient responses, and linear controllers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**239**	Engineering Economics	Economic dimensions in the evaluation of engineering alternatives. Income and cash flow. Time value of money. Cost/benefit analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102; MAT 170 or higher
EGR	**280**	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites: APM 265, APM 270, MAT 265 or MAT 270
EGR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**301**	Fall Concentration Project	Design, communication, and critical thinking developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**302**	Spring Concentration Project	Design, engineering practice, and communication developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 102, EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**331**	Electrical Implementation Technology	Conducting electrical projects using the facilities of the ASU Polytechnic campus. Juniors majoring in engineering or technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 or EET 301
EGR	**332**	Electrical Power and Heat	Generation and distribution of electrical power within localized systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**333**	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**335**	Instrumentation III	Noise in electrical systems and associated limits on instrumentation and measurement.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235
EGR	**336**	Introduction to Mechatronics	Pneumatic, hydraulic, mechanical, and electrical actuators. Models of mechatronic systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 231, EGR 235 and EGR 238
EGR	**337**	Remote Sensing and Imaging Principles	Remote sensing and imaging principles with a focus on land development applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): CHM 113; EGR 280; MAT 267, MAT 272, or MAT 294/APM 294-Mathematics of Change III
EGR	**339**	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli¿s equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: PHY 111 or PHY 121 with D or better; APM 266, APM 271, MAT 266 or MAT 271 with D or better
EGR	**341**	Testing and Failure Prevention	Testing behavior of engineering materials under various loads. Evaluation of causes, mechanisms, and prevention of failure in structures and components.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**342**	Computer-Aided Engineering	Theory and use of computer tools for high-level engineering analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**343**	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 221 and EGR 222
EGR	**346**	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 343
EGR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**401**	Engineering Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: EGR 301 and EGR 302
EGR	**402**	Engineering Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Prerequisite(s): EGR 401 taken within one previous term

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EGR	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 340; Students who have credit for MET 432, may not enroll in EGR 432
EGR	**433**	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275; MAT 342 or MAT 343
EGR	**434**	Digital Signal Processing: Media Standards	Introduces signal compression and reconstruction; audio, image, and video media standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**435**	Digital Signal Processing: Filtering	Introduces digital filtering, FIR and IIR filters, filter design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**436**	Wireless Communication Principles	Introduces wireless digital communications systems; overview of important concepts, including coding, modulation, equalization, decoding, and multiple access protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**437**	Wireless Communication Protocols	Surveys commercially important digital wireless protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**438**	Electromagnetic Compatibility and Interference	Electromagnetic compatibility and interference. Grounding and shielding techniques. Cables, connectors, and leads. Regulations and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 and PHY 331
EGR	**445**	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 301 or EGR 302
EGR	**492**	Honors Directed Study		N	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-6		
EGR	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
EGR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1.		
ELL	**515**	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs). Credit is allowed for only ELL 515 or 415.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELL	**516**	Advanced SEI Methods for Ells	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology. Credit is allowed for only ELL 516 or 416.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELL	**416**	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology. Credit is allowed for only ELL 416 or 516.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
ELS	**501**	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**502**	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport. Prerequisite: ELS 501 or Instructor Approval.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: ELS 501
ELS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ELS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ELS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EN	**106**	Lit Apprec		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
EN	**584**	Internship		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
ENE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
ENE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105

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ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**111**	Learning Community Composition I	Discovering, researching, and developing ideas in relation to the writer's purpose, subject, and audience. Only taught within a Liberal Arts (CLAS) Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**112**	Learning Community Composition II	Critical reading and writing; emphasis on rhetorical strategies of argumentation. Requires research paper. Only taught within a CLAS Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 101 or ENG 111 with C or better
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG	**197**	Medical Writing	For students in the MedStart summer program. Designed to further critical thinking, reading, and writing skills for students interested in a medical career.	N	LEL	N	GNA	Liberal Arts and Sciences	Department of English	3.		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**302**	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**307**	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210 with C or better
ENG	**312**	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**313**	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**315**	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**325**	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**326**	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**330**	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**331**	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**342**	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**345**	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**355**	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**356**	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**372**	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**374**	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**385**	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better. Students who have credit for ENG 310-Interm Fiction, may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better. Students who have credit for ENG 310-Intermed Poetry, may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & H	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**413**	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 with C or better. Students who have credit for LIN 517, may not enroll in ENG 413
ENG	**414**	Studies in Linguistics	Relationship of linguistics to literature, gender, power, and other social issues.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisite: ENG 200 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**416**	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**419**	English Literature in the Early 17th Century	Topics, authors, and themes in English literature, 1603-1660.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**422**	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**426**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ENG	**427**	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**428**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ENG	**429**	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**430**	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**434**	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**436**	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**442**	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**444**	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**445**	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**447**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200; ENG 200-level literature course,or SLC 202, or FMS 100; FMS 200 . Students who have credit for SLC 450 or FMS 442 may not enroll in ENG 447
ENG	**448**	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**452**	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**453**	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**458**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
ENG	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**465**	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**469**	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**470**	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**474**	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**475**	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & G	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**480**	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**487**	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Poetry or ENG 387 with C or better. Students who have credit for ENG 411-Poetry, may not enroll in ENG 487
ENG	**488**	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Fiction or ENG 388 with C or better. Students who have credit for ENG 411-Fiction, may not enroll in ENG 488
ENG	**490**	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Poetry or ENG 487 with C or better. Students who have credit for ENG 495-Poetry, may not enroll in ENG 490
ENG	**491**	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Fiction or ENG 488 with C or better. Students who have credit for ENG 495-Fiction, may not enroll in ENG 491
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**495**	Literary Forms: Theory and Practice	Types, history, analysis of traditional forms and contemporary adaptations. Separate sections for poetry, fiction. Each genre may be taken once.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411 with C better
ENG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**502**	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**503**	Comparative Literature, Theory, and Practice	Problems, methods, and principles of comparative analysis, illustrated by selected critical essays and literary/cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**504**	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**505**	Writing Workshops	Intense poetry and fiction workshops for experienced writers, emphasizing individual style. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**506**	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**507**	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 480, may not enroll in ENG 507
ENG	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**530**	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**531**	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**532**	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**533**	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**534**	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**535**	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**536**	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**537**	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**538**	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**539**	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**540**	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**542**	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**543**	Studies in Anglophone Literatures	Selected topics, texts, periods, literary trends in works by world authors writing in English.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**544**	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**545**	Studies in Women's Literatures	Selected topics, texts, periods, and figures in works written by and/or about women, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**546**	Gender Studies	Selected topics, periods, and themes in the study of gender and sexuality, including attention to theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**550**	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**551**	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**552**	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**553**	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**554**	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**556**	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**560**	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**561**	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**562**	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**563**	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		
ENG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**597**	MA Capstone Seminar	The capstone seminar is required for MA students who choose the non-thesis option, which can consist of writing a research paper, designing curriculum, or developing a professional portfolio. Requires oral presentation of project.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
ENG	**602**	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**603**	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**604**	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**606**	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**632**	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**635**	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**636**	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**639**	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**642**	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**645**	Advanced Studies in Gender Issues	Seminar courses that consider the influence of gender on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**651**	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**652**	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**654**	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**661**	Advanced Studies in Film	Seminar courses on topics, genres, and figures in film studies, including technical and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**662**	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**663**	Fiction Genres	Creative writing courses in time and fiction, gothic fiction, myth in fiction, science fiction, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**664**	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**665**	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**667**	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
ENG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**305**	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**323**	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**386**	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better. Students who have credit for ENG 310-Interm Fiction, may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better. Students who have credit for ENG 310-Intermed Poetry, may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisite:must have completed ENG 102, or 105, or 108 with a grade of C or better; or be currently enrolled in ENG 102, 105, or 108
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & H	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**410**	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**431**	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**432**	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**433**	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**437**	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**438**	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**450**	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**454**	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**455**	Contemporary Women Writers	Critical examination of literature by contemporary women writers. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**460**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**462**	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**463**	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**477**	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**230**	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**243**	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**244**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**320**	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**344**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**366**	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**367**	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**368**	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**373**	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**375**	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**376**	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**377**	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**378**	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**379**	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**382**	Digital Project Management for Humanities and Arts	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**383**	Digital Media in the Humanities and Arts	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better. Students who have credit for ENG 310-Interm Fiction, may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better. Students who have credit for ENG 310-Intermed Poetry, may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**464**	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**466**	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**467**	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**468**	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**481**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Students who have credit for ENG 581, may not enroll in ENG 481
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**483**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**581**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for ENG 481, may not enroll in ENG 581
ENG	**583**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
EPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPA	**795**	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
EPD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EDP 710, EDP 712 or EDP 714 with C or better
EPD	**710**	Current Research in Design	Review and critical evaluation of contemporary literature and method in architecture, building science, interior design, industrial design, and landscape architecture. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**712**	Current Research in Planning	Review and critical evaluation of contemporary literature and method in environmental planning, landscape ecology, urban design, and urban and regional planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**714**	Current Research in History, Theory, and Criticism	Review and critical evaluation of contemporary literature and method in the theory and history of architecture, design, and planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EPD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
EPD	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		
EPD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
ESS	**501**	Environmental Social Science Theory and Practice I	First part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**502**	Environmental Social Science Theory and Practice II	Second part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**510**	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**513**	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ESS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ESS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ESS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
EST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**200**	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		Pre-requisites: Sophomore standing
EST	**210**	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJT's, FETs, op-amps.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	**310**	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210
EST	**345**	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200
EST	**370**	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200; EST 210; UET 331
EST	**372**	Wireless Communication Systems	Components and signal processing for modern wireless communication systems, including major applications, problems, and new technologies.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: EST 310
EST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**482**	Industrial Practice: Internship/Co-Op	Specially assigned or approved activities in electronic industries or institutions. Requires report.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
EST	**490**	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
EST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Must have an University Cum GPA of 3.00 or greater; Must be a Tech Science or Engineering senior OR a Graduate, NonDegree or Post Bacc student
EST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
ETH	**100**	Introduction to Ethnic Studies	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	
ETH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**300**	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	
ETH	**310**	Research Methods in Ethnic, Racial, and First Nations Populations	Examines analytical tools and methodological approaches (ethnography, oral histories, digital-storytelling, information literacy) to study ethnic, racial, and first nations populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
ETH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ETH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ETM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**301**	Environmental Management	Focuses on knowledge and skills necessary to manage environmental programs. Perspectives include regulatory, individual, corporate, and consulting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**302**	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**303**	Environmental Regulations	Explores environmental laws, regulations, and directives. Addresses air, land, and water.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**360**	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**362**	Managing Natural and Technological Disasters	Federal, state, and local responses to emergencies. Management of mass casualties, evacuation, sheltering, and terrorism; declaration of emergency procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources. Cross-listed as FSM 363. Credit is allowed for only ETM 363 or FSM 363.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**364**	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**401**	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**402**	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**406**	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**407**	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-E**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-M**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-E**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-M**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**428**	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	
ETM	**460-E**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**460-M**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**461**	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy. Credit is allowed for only ETM 461 or 561. Prerequisite: junior or senior standing or instructor approval.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**468**	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**469**	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**501**	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**502**	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**503**	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**504**	Technology for Storage, Treatment, and Disposal of Hazardous Materials	Current and state-of-the-art technologies and future trends for storage, treatment, and disposal of hazardous materials and waste.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**505**	Quantitative Analysis and Practical Laboratory Techniques	EPA methodologies for sampling and analysis of soils and water. Includes quality assurance and regulatory requirements. Lab is arranged off site.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**506**	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**507**	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**520**	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**522**	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**523**	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**524**	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**525**	Risk Assessment for Hazardous Materials	Applies the risk assessment process in situations ranging from hazardous facilities regulation to toxic substances in the environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**526**	Current Environmental Technology Issues	In-depth study of current issues in environmental technology facing both the private and public sectors.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**527**	Environmental/Resources Regulations Concepts	Develops environmental regulations from common law to statutory requirements. Emphasizes Superfund, hazardous materials, toxics, and liability contracts.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**528**	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**540**	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**560**	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**561**	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program. Credit is allowed for only ETM 561 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**567**	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**571**	The Foundations of Homeland Defense and Security	The enemy, policies, key players, and legal issues surrounding homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**572**	Multidisciplinary Approaches to Homeland Defense and Security: Collaborating to Integrate	Multidisciplinary approach to prevention, mitigation, preparedness, response, and recovery from incidents of national significance.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**573**	Strategic Planning and Organizational Imperatives in Homeland Defense and Security	Efforts to integrate and mobilize government and private sector resouces for homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**574**	Special Topics in Homeland Defense and Security	Discusses contemporary challenges of asymmetric warfare, terrorism, and the virtual global battlespace, as well as emerging threats to homeland security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ETM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
ETM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
EVO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
EVO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EVO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
EVO	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EXW	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
EXW	**105**	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week. fee	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**205**	Physical Activity Instruction: Intermediate	Intermediate-level instruction in a variety of physical activities. Continuation of EXW 105. Y grade only. May be repeated for credit. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must have completed EXW 105 with a C or greater
EXW	**212**	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	**215**	Physical Activity and Healthy Lifestyles	Applies principles of physical activity to personal fitness testing and program planning for people of all ages. Telecampus course. Not open to Exercise and Wellness majors or to students with credit ib EXW 325.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Non-EXW students; Credit is allowed for only EXW 215 or EXW 325
EXW	**300**	Foundations of Exercise and Wellness	Principles and foundations of fields of study related to health promotion, physical activity, and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: EXW 100 or KIN 100 with a D or better, or co-enrolled in EXW 100 or KIN 100
EXW	**301**	Concepts of Fitness and Wellness	Guidelines for achieving health benefits of physical activity and other healthy lifestyles. Telecampus course. Not open to Exercise and Wellness majors or to students with credit in EXW 325.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Non-EXW students; Students may not enroll for EXW 301 who have received a D or better in EXW 325
EXW	**302**	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**305**	Physical Activity Instruction: Advanced	Advanced-level instruction in a variety of physical activities. Continuation of EXW 105. May be repeated for credit. Y grade only. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**310**	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-heath consumerism, and statistical analysis.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: Must be a Exercise Wellness student; must have completed MAT114, MAT117, MAT119, MAT142 or MAT170 with a C or greater
EXW	**311**	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**315**	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 and BIO 202 with C or better
EXW	**320**	Program Development and Leadership	Principles of planning, organizing, promoting, and leading fitness and wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**322**	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
EXW	**325**	Fitness for Life	Physical fitness and benefits of exercise with emphasis on self-evaluation and personalized program planning for a lifetime. Not open to students with credit in EXW 215 or 301.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students may not sign up for EXW 325 who have received a D or better in EXW 215 or EXW 301
EXW	**330**	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 with C or better
EXW	**335**	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementaion of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 and 202 with C or better
EXW	**342**	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**346**	Health Promotion and Program Evaluation	Introduces and applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 300 with C or better; EXW 342 with C or better
EXW	**350**	Substance Abuse and Addictive Behavior	Studies addictive substances, their pharmacology and effects. Psychosocial risk factors for, and consequences of, substance abuse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**380**	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed NTR 241 and PGS 101 with a C or greater
EXW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**400**	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**420**	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**425**	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 315 with C or better; EXW 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	**442**	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites:EXW 300 with a D or better
EXW	**444**	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 300 and EXW 310 with a C or greater
EXW	**450**	Cultural and Social Issues in Exercise and Wellness	Examines contemporary sociocultural issues and social determinants of health and physical activity. Focuses on health disparities, obesity, and social stressors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	(L or SB) & C	Pre-requisites: PGS 101 and EXW 300 with C or better
EXW	**460**	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	FLD	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Exercise and Wellness concentration students with EXW 400, 420, and 425 with C or better or EXW Health Promotion concentration with EXW 346, and 444 with C or better
EXW	**492**	Honors Directed Study		N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
EXW	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
EXW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		

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EXW	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**501**	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**505**	Applied Exercise and Wellness Laboratory Techniques	Investigative techniques used in the applied exercise testing/prescription lab. Emphasizes cardiorespiratory assessment, energy balance, body composition, and electrocardiography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**534**	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**536**	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**538**	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**540**	Psychosocial Issues in Exercise and Wellness: Stress, Coping, and Resilience	Critically explores the impact of psychological and social factors on human wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**542**	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**544**	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**635**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**640**	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**641**	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**642**	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 500 and EXW 501 with a C or greater
EXW	**643**	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**645**	Biostatistics in Physical Activity, Nutrition, and Wellness	Introduces biostatistical methods in physical activity, nutrition, and health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**701**	Research Methods for Community-Based Interventions	Develops skills to design and conduct community-based research interventions, identify essential elements of program fidelity, analyze quasi-experimental research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
EXW	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
FAS	**101**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
FAS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
FAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
FAS	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & H	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
FAS	**361**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	Pre-requisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390 (or equivalent) completed with D or better or currently enrolled. Credit is allowed for only FAS 361 or SOC 391
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & C	
FAS	**390**	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
FAS	**431**	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
FAS	**435**	Advanced Marriage and Family Relationships	Recent research, issues, and trends relating to marriage and family interaction. Influence of family composition, physical environment, family patterns, and values on family dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	
FAS	**440**	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
FAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		Pre-requisite: Must be an Honors student
FAS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
FAS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		
FAS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-7		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		
FAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**503**	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	DIS	N	GNA	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**531**	Family Theory Development	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
FAS	**539**	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
FAS	**570**	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**571**	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**572**	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**573**	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**574**	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**575**	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**576**	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**577**	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**578**	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**579**	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**581**	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisite: MAS-MFT student
FAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
FAS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
FAS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-15		
FAS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		
FAS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-15		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**421**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**436**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**445**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).

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FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	
FIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**300**	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ACC 241 or ACC 271, and ECN 221 and ECN 212 with a grade of C or better.
FIN	**301**	Fundamentals of Finance	Introduces the basic concepts, principles, and tools of financial management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status; ACC 240, ECN 112 and QBA 221 with C or better
FIN	**302**	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W. P. Carey Finance major; ACC 240/241. ECN 221 and ECN 212 with a grade of C or better.
FIN	**303**	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; Must have ACC 241 or 271 , ECN 211 or 213, ECN 212 or 214, ECN 221 and MAT 211 or 271 with a grade of C or better.
FIN	**331**	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 241 or ACC 271, and ECN 221 with a grade of C or better.
FIN	**361**	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; must have completed FIN 302 or FIN 300 with a grade of C or greater or be currently enrolled.
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Non-Finance students; Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree seeking student
FIN	**410**	Investments	Strategies and mechanics of investing in stocks, bonds, and derivatives. Topics include investment selection, portfolio management, financial markets, and institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Management student with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better
FIN	**411**	International Finance	Explores the environmental challenges facing financial managers in global financial markets and develops tools and techniques to meet such challenges.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt OR Int' Studies student; FIN 300 or 301 with C or better; GLB 301 with C or better
FIN	**412**	Financial Management	In-depth extension of core finance course. Typical topics include financial planning/control, risk and valuation, capital budgeting.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better; ACC 236 or 410 with C or better
FIN	**421**	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 303 or 361) with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	**427**	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**431**	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**456**	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	G	Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**461**	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	L	Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**481**	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student with Honors status; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Finance	1-6		Pre-requisites: Must be an Honors student
FIN	**493**	Honors Thesis		N	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Pre-requisites: Must be an Honors student
FIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		
FIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	**502**	Managerial Finance	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Pre-requisites: ACC 502 with C or better; ECN 501 with C or better
FIN	**520**	Financial Modeling	Demonstrates how Excel programming techniques can be used to model and manipulate financial data, as applied to equities, options on equities, and options on bonds.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**521**	Investment Management	Valuation of equities and fixed income securities. Trading strategies and portfolio management. Performance evaluation. Trading mechanisms and market organization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**525**	Investment Strategies	Introduces theories and practices of the investment process. Covers the fundamental principals and applications of modern portfolio theory, risk-return relation, asset pricing models, investment performance evaluation, and stock and bond valuation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**527**	Derivatives and Risk Management	Characteristics and pricing of forwards, futures, swaps, options. Applies instruments for hedging strategies, corporate risk management, and capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**530**	Derivatives	Covers options, forward contracts, futures contracts, and swaps. Provides a good knowledge of how these contracts work, how they are used, and how they are priced.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**531**	Financial Markets and Intermediaries	Short-term and long-term fixed-income securities and their marketplaces, tools for bond portfolio and interest rate risk management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**540**	Financial Markets and Instruments	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**550**	Fixed Income Securities	Describes important fixed income securities and markets, and develops tools for valuing fixed income securities and managing interest rate risk. Covers traditional bonds and term structure concepts as well as fixed income derivatives and interest rate modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**551**	Applied Fundamental Analysis	Analysis of financial documents to determine quality of earnings. Forensic financial analysis to diagnose financial health and sustainable growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 and ACC 502 with a grade of C or greater or be currently enrolled
FIN	**556**	International Financial Management	Behavior of exchange rates, interest rates, inflation rates. Analyzes corporate exposure to exchange rate risk and hedging strategies. Multicurrency capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater or be currently enrolled

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FIN	**560**	International Finance and Investments	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**561**	Strategic Financial Management	Capstone case-oriented course in strategic applications of corporate finance. Acquisition, allocation, and management of funds within the business enterprise.	N	DIS	N	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**570**	Portfolio Strategies and Hedge Funds	Introduces the principles of asset valuation from an applied perspective. Valuation of financial securities and portfolio management applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**581**	Advanced Valuation Methods	Analyzes practical aspects of valuing the enterprise using economic value added, free cash flow, and other financial techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
FIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**781**	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1.		
FIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FMP	**201**	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	
FMP	**202**	Film and Media Production Crew	Provides opportunity to serve in various capacities on student film sets in order to obtain practical production experience. Practicum. Prerequisite: instructor approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
FMP	**250**	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**300**	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	**318**	Directing for Film	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film and Media Production student; FMP 320 with C or better
FMP	**320**	Film and Media Post-Production	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be in Film and Media Production student; Completed FMP 300 (or THE 400) with a grade of C or better
FMP	**345**	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**417**	Business Ethics in Entertainment	Business and ethical practices of the entertainment industry; analysis of ethical decision-making techniques.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**480**	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: FMP 318 with C or better; majors only
FMP	**481**	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: FMP 318 with C or better; majors only
FMP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**492**	Honors Directed Study		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
FMP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
FMP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor
FMP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Pre-requisites:Must be a Film & Media Production student
FMP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisite: Fine Arts Graduate student
FMS	**100**	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	**110**	Introduction to New Media	Explores the cultural effects of new media technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	
FMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**200**	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & H	
FMS	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**209**	Screenwriting Fundamentals (online)	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Restricted to online Film and Media Studies students only
FMS	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**300**	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**302**	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**309**	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**312**	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**340**	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C & H	
FMS	**350**	Virtual Reality in Film and Media	Analyzes virtual reality in films, media, and fiction. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**351**	Emerging Digital Media	Analyzes modern cultural and digital technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L	Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**354**	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: FMS 100
FMS	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	**377**	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites:ENG 102(or ENG 105/108); FMS 100; FMS 309 with grades of C or better, or currently enrolled
FMS	**440**	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**441**	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**442**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 200; ENG 200-level literature course, SLC 202 or FMS 100; FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	**450**	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**460**	Masculinity and Film	Examines the representation of masculinity and the male body in film. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**461**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**468**	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**480**	Globalization, Technology, and Culture	Studies the socio-political relationship between media and the evolution of globalization. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**481**	Entertainment Technologies	Applies academic and industry knowledge to simulate and to solve "real world" entertainment industry problems and needs.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**482**	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**483**	Techno-Entertainment Convergences	Uses historical and scientific methods to forecast future technological developments and use in the entertainment industry.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**490**	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
FMS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
FMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
FMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**502**	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504
FMS	**507**	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students

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FMS	**509**	Race, Sex, and Identity Online (Online)	This course is available online only. Investigates scholarly methods and studies focused on the intersection of race, gender, and sexuality online.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**511**	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**512**	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**521**	Semiotics of Popular Culture	Uses semiotics and cultural studies to uncover representations of alienation.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FRE	**101**	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings. Credit is allowed for only FRE 101 or 111	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 101 if they have received a C or better in FRE101,102,201,202,205,311,312,321,322,411,412
FRE	**102**	Elementary French	See FRE 101. Credit is allowed for only FRE 102 or 111.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisite: FRE 101; May not sign up for FRE 102 if received a C or better in FRE 111,201,202,205,311,312,321,322,411,or 412
FRE	**107**	French for International Professions I	Accelerated alternative to FRE 101 and 102 or FRE 111. Functional approach. Emphasizes communicative competence for international professions. Credit is allowed for only FRE 107 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
FRE	**111**	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study. Credit is allowed for only FRE 111 or 101 or 102 or 107. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 111 if they have received a C or better in FRE 101,102,201,202,205,311,312,321,322,411,412
FRE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
FRE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**201**	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Student may not enroll in FRE 201 if received a C or better in: FRE202,205,311,312,321,322,411,412
FRE	**202**	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not sign up for FRE 202 if they have received a C or better in FRE205,311,312,321,322,411,412
FRE	**205**	Readings in French Literature	Designed to teach reading with facility and comprehension. Vocabulary building and textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: FRE 202: Students who have received a C or better in FRE 321 or 322, may not enroll in FRE 205
FRE	**207**	French for Business	Alternative to FRE 202. Functional approach. Emphasizes communicative competence for international professions. Not open to students with credit in FRE 202. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
FRE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**311**	French Conversation	Further practice in speaking French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 311, if they have received a C or better in FRE 411.
FRE	**312**	French Composition	Further practice in writing French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 312, if they have received a C or better in FRE 412
FRE	**315**	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 with a grade of D or better, or currently enrolled
FRE	**319**	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312 with a grade of D or better or currently enrolled
FRE	**321**	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & H	Pre-requisites:FRE 205, 312 with a grade of D or better or currently enrolled
FRE	**322**	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:Completed FRE 205 & 312 with a grade of D or greater, or be currently enrolled
FRE	**325**	Introduction to French Film	Studies French artistic contribution from 1895 to present, with emphasis on recent films starting with the New Wave.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**411**	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 311 with a grade of D or currently enrolled & 6 hours of 300-level French
FRE	**412**	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312; 6 hours of 300-level French

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FRE	**415**	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:6 hours of upper-division French
FRE	**416**	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	pre-requisites:6 hours of upper-division French
FRE	**421**	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 & 312 with a grade of D or better, or currently enrolled
FRE	**422**	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ASB 480, ENG 213 or SLC 400
FRE	**423**	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ASB 480, or ENG 213, or SLC 400 with a D or better or currently enrolled
FRE	**432**	Gay Identities in Modern French Literature	Examines the representation of homosexuals as well as the emergence of homosexuality as a theme in modern French literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of Dor better, and 6 hours of 300-level French courses
FRE	**441**	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**442**	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**445**	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**451**	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**452**	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**453**	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**461**	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**462**	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**471**	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**472**	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:9 hours of 300-level French courses with a grade of D or better
FRE	**480**	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 412 with a grade of D or currently enrolled
FRE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**485**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 480 with a grade of D, or currently enrolled
FRE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
FRE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
FRE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
FRE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**510**	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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FRE	**521**	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**531**	Medieval French Literature	Readings in the epics, early drama, Roman courtois, and other representative literary genres of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**535**	Identity, Gender, and Society in Early Modern French Literature	Readings in French Renaissance literature with special focus on Rabelais, Montaigne, Marguerite de Navarre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**585**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FRE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**790**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FSA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**502**	Managing Change in the Fire Service	Dynamics of organizational change and the effect change has on the delivery of fire services to the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**503**	Fire Service and the Community	Theoretical concepts of public service to build an understanding of how the fire service fits within the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**510**	Fire Department Budgeting and Finance	Functions of budgeting and finance in fire departments within the context of the public sector.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**522**	Leadership in the Fire Service	Leadership theories analyzed in a variety of contexts within public and private organizations, then applied to the leadership challenges in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**530**	Public Policy in the Fire Service	Public policy and the fire services' role in the making of public policy in the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**540**	Applied Research Methods in the Fire Service	Research methods applicable to problems that arise in the fire service, including assessments of programs and customer service research.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSA	**550**	Fire Service Program Management	Functions of developing and managing fire service programs. Designed for advanced students of fire service administration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**551**	Fire Prevention and Public Fire Education	Managing fire prevention organizations and administering fire prevention programs in a contemporary society.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**552**	Emergency Medical Services Administration	Complex issues of administering an Emergency Medical Services (EMS) division in a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**553**	Special Operations in the Fire Service	Focuses on the variety of special emergency services operations provided by contemporary fire departments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**554**	Emergency Fire Operations Administration	Delivery of emergency services to a community by a contemporary fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
FSA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
FSA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSE	**105**	College Adjustment and Survival	Explores career goals and majors. Emphasizes organization and development of study skills, including time management, stress management, and use of the library.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Freshman or Sophomore in the Ira A. Fulton School of Engineering
FSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**200**	Elements of Engineering Design	Advanced version of introduction to engineering for students who have not taken an introduction to engineering course. Credit is allowed for only FSE 200 or various program introduction to engineering courses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: A grade of C or better in PHY 121 or currently enrolled AND a grade of C or better in MAT 265 or 270.
FSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**301**	Entrepreneurship for Engineers	Overview of entrepreneurship, with emphasis on principles suitable for undergraduate engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: School of Engineering BS or BSE student; Minimum Junior standing
FSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: Engineering or Construction BS or BSE student
FSE	**399**	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisite: Engineering BS or BSE student
FSE	**400**	Creating and Launching a Technology Venture	Focuses on creative and logical processes involved in developing a business idea and investigating its market feasibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**401**	Intellectual Property for Technology Ventures	Provides basic understanding of legal issues likely to be encountered in a technology venture; practical approaches and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**402**	Operating a Technology Venture	Managing and leading technology ventures. Principles of organizing, planning, controlling, and leading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**403**	Entrepreneurship Practicum	Places students pursuing a Certificate in Technology Entrepreneurship with a practicing entrepreneur to learn about venture development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
FSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**501**	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	**502**	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**503**	Collaborative Innovation Management	Techniques and practices of collaboration innovation, including an indepth look at managing outsourcing relationships and "wikinomics."	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**504**	Corporate Venturing and Intrapreneurship	Explores how companies can create intrapreneurial cultures that lead to greater levels of corporate venturing and long-term competitiveness.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**590**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**594**	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: School of Engineering Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**690**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**790**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSM	**304**	Fire Personnel Management	Promotion, personnel development, career and incentive systems, validation of physical requirements, managerial and supervisory procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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FSM	**305**	Quality Emergency Services	Covers quality issues relating to services delivered by progressive fire departments. Covers management of personnel and resources during organizational change.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**306**	Fire Prevention Organization and Management	Examines and evaluates the techniques, procedures, programs, and agencies involved in preventing fires.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**307**	Fire Department Safety Organization and Management	Focuses on the management of fire department safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		
FSM	**308**	Fire Department Budgeting	Examines the role of fire department budgets and their relationship to other levels of government as a planning tool.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**309**	Emergency Medical Service Organization and Management	Focuses on the administration and management of emergency medical services delivered by a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**400**	Human Behavior and the Fire Threat	Proper ways of conducting post-fire interviews; emphasizes the psychological effects of communications during emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**401**	Labor Relations in the Fire Service	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**404**	Program Management and Accreditation	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**405**	Fire Service Leadership	Focuses on developing personal and organizational leadership qualities required to be successful in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**421**	Political and Legal Consideration in Fire Science	Study of legal and political considerations that affect the decision making of fire service managers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**425**	Fire Service Administration	Presents modern management and planning techniques that apply to organizing a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**460**	Incident Management Systems and Emergency Operations Center	Covers IMS, terminology, players, and management philosophy. EOC setup, activation, operation, and termination. EOC funding and politics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**493**	Honors Thesis	Capstone applied project. Applies knowledge learned from FSM course work to solve a practical fire service problem.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
FSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SB & G	
GCU	**141**	Introduction to Economic Geography	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	

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GCU	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**322**	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	**323**	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**325**	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**326**	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**327**	Geography of Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**328**	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**332**	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**344**	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	**350**	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**352**	Political Geography	Relationship between the sociophysical environment and the state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**359**	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G & H	
GCU	**360**	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**361**	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**364**	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**414**	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**421**	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	**423**	Geography of South America		N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**424**	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**425**	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or SB) & G	
GCU	**426**	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**432**	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**433**	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**441**	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**442**	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**444**	Geographic Studies in Urban Transportation	Current urban transportation issues in metropolitan Phoenix. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**453**	Recreational Geography	Examines problems surrounding the organization and use of space for recreation. Introduces geographic field survey methods of data collection and analysis.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**455**	Historical Geography of U.S. and Canada	Geographical perspective on the evolution of the United States and Canada from pre-Columbian times to early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & H	
GCU	**474**	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**495**	Quantitative Methods in Geography	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: MAT 119, 170, 210 or 270
GCU	**496**	Geographic Research Methods	Scientific techniques used in geographic research. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GPH 370 with C or better
GCU	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies. Seminar.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**515**	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**526**	Spatial Land-Use Analysis	Determination, classification, and analysis of spatial variations in land-use patterns. Examines the processes affecting land-use change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**529**	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**585**	Advanced Research Methods in Geography	Specialized research techniques and methodologies in economic, political, or cultural geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**596**	History of Geographic Thought	Historical development of geographic thought from pre-Greek days to the early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**671**	Introduction to Geographic Teaching	Intensive course in geographic education, scientific method in research on geographic education, research trends, resources for teaching, best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GCU	**672**	Physical Geography for Teachers	Transfer of matter and energy exhibited in the Earth's climate, hydrology, soils, biogeography, and landforms; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**673**	Human Geography for Teachers	Analyzes cultural, economic, urban, historical, transportation, population, political, and development geography; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**674**	Geographic Techniques for Teachers	Introduces geographic techniques, including GPS, GIS, remote sensing, cartography, qualitative, and field methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GCU	**675**	World Geography for Teachers	Systematic overview of geographic knowledge about different world regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**676**	North American Geography for Teachers	Systematic overview of geographic knowledge about different North American regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**677**	Geography Across the Curriculum	Intensive course on intergrating reading, writing, and mathematics standards with geography content; selected case studies; best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GCU	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SB & G	
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites:must have completed MAT 117, or 119, or 142, or 170, or 210, or be currently enrolled in one of these
GCU	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**361**	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**373**	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation. fee	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SG	Pre-requisite: PSY 230 or SBS 304
GCU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SB & G	
GER	**101**	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar. Credit is allowed for only GER 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**102**	Elementary German	See GER 101. Credit is allowed for only GER 102 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**111**	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study. Credit is allowed for only GER 111 or both GER 101 and 102. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
GER	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**201**	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**202**	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**311**	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays, and stories. 3 semester hours limit for majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**312**	German Conversation	See GER 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**313**	German Composition	Intensive practice in writing, emphasizing style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**411**	Advanced Grammar and Conversation	Improvement of diction and idiom through intensive oral review.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**412**	Advanced Grammar and Composition	Improvement of writing ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:GER 313 with a grade of D or better or currently enrolled
GER	**415**	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**416**	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**421**	German Literature	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: 6 hours of 300-level German courses
GER	**422**	German Literature	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: 6 hours of 300-level German courses

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	**453**	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	
GER	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
GER	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GER	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
GER	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**521**	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**523**	German Drama	Drama of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**527**	The Novelle	Special studies in the German short story.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
GER	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GIT	**110**	Technical Graphics	Representation of 2-D geometry in orthographic, axonometric and oblique projection; detail, assembly, sectional, and auxiliary views; ANSI-standard lettering, size, and position symbols.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GIT	**135**	Graphic Communications	Introduces the technologies involved in the design, image generation, transmission, and industrial production of multiple images for consumer utilization.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**210**	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving. Also includes communication, cultural, and societal influences.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**212**	Computer-Aided Design and Drafting (CADD)	CADD for product design, representation, and documentation; includes projection theory, descriptive geometry, graphics analysis, drafting standards, and precision dimensioning techniques.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	
GIT	**215**	Introduction to Graphics Programming	Introduces analyzing, planning, and executing graphic programs using industry-standard programming tools.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**230**	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**237**	Web Content Design	Introduces design principles for visual content on the World Wide Web; raster, vector, fonts, portable documents, color palettes, file formats.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**301**	Web Site Development for Nonmajors	Focuses on the basic skills necessary to successfully design or maintain a Web site; geared toward non-GIT majors.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**303**	Digital Publishing	Introduces software and hardware used for digital publishing and infographics.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**312**	3-D Computer Graphics Modeling and Representation	3-D solid modeling applications: concepts, techniques, data structures, modeling strategies, assemblies, geometric representation.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	
GIT	**313**	Technical Illustration and Photorealistic Rendering	Computer-generated graphics for technical illustration and design presentation: axonometric and perspective drawing; shading, shadowing, materials and textures; photorealistic rendering for PostScript output.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**314**	Multimedia Design, Planning and Storyboards	Creative and conceptual process of content selection, planning, designing, flowcharting, storyboarding, proposing, configuring, prototyping, and presenting multimedia projects.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**333**	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digitial printing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**334**	Image Capture and Manipulation	Theory and application of image capture techniques used for all copy formats and conversion processes required for reproduction or dissemination.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**335**	Computer Systems Technology	Surveys computer-based technology covering hardware, software, storage, networking, Internet, telecommunications, and information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**337**	Web Content Design	Introduces design principles for visual content on the World Wide Web; raster, vector, fonts, portable documents, color palettes, file formats.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**352**	Technical Presentations	Technologies for planning, creating, and delivering individual and group presentations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**384**	Commercial Digital Photography	Digital image, conversion, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**411**	Computer Animation	2-D and 3-D computer animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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GIT	**412**	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: project management, client considerations, and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**413**	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**414**	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**415**	Computer Graphics: Business Planning and Management	Implementation planning: feasibility and application studies; needs assessment and operational analysis techniques; organization, managerial, and technology considerations; business plan development.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**417**	Advanced Internet Programming	Uses industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**432**	Graphic Industry Business Practices	Business practices related to press/prepress/Web industries; trade customs, cost analysis, marketing and management approaches.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**435**	Web Management and E-Commerce	Internet Web site management, security, online databases, and new e-commerce business models.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**436**	Gravure Technology	In-depth study of the market profile and production sequences related to the gravure method of printing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**437**	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**441**	Graphic Information Systems	Graphic information systems common to the workplace: graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**450**	Digital Workflow in Graphic Industries	Analyzes digital production systems for input, assembly, and output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
GIT	**537**	Current Issues in Quality Assurance	Directed group study of selected issues relating to quality assurance in the printing, publishing, and information industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**538**	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**540**	Cross-Media Design Solutions	Examines universal design theory, creative problem solving, and case study applications for print and new media products of the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**541**	Graphic Information Systems	Graphic information systems common to the workplace; graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**542**	Information Design and Usability	A hybrid of design and technology solutions focusing on how information is organized graphically to communicate, and how usability engineering is applied to human factors.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		

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GIT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**301**	Business in the Global Environment	Discusses multinational corporate strategy, structure, operations, and the social and economic factors affecting global business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.	G	Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status.
GLB	**302**	Culture and Diversity Management	Develops an understanding of culture (individual, organizational, national, subcultural, transnational, and global) and change and interaction applied to management decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3-4		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**303**	Relationship Management	Overviews types of relationships found in organizations, then trains students in the interpersonal skills necessary to effectively manage those relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**401**	Global Business Integration	Provides an integrative framework for global corporate strategic analysis and opportunities for integrated decision making in actual and simulated businesses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: Global Mgt student with professional status; Minimum 87 hours; OPM 301 and (FIN 300 or 301) with C or better; MKT 300 or 301 with C or better; GLB 303, HRM 410 or MGT 301 with C or better
GLB	**411**	Global Competitiveness	Discusses factors contributing to international competitive success of nation-states, national industries, and specific firms. Includes detailed analysis of actual firms.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.		Pre-requisites: School of Global Management and Leadership International Studies student with Professional or Conditional status; GLB 301 with C or better
GLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
GLB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-6		
GLB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
GLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: School of Global Management and Leadership International Studies student with Professional or Conditional status
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ & G	
GLG	**102**	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. fee. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & H	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
GLG	**104**	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	
GLG	**105**	Introduction to Planetary Science	Solar system objects and their geologic evolution, surfaces, interiors, and atmospheres; weekly lab for data analysis and experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SG	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & G	
GLG	**111**	Geologic Disasters Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	
GLG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**300**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Not open to Geology majors with credit in GLG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		

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GLG	**304**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**310**	Structural Geology	Geologic structures and the mechanical processes involved in their formation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 101 AND either MAT 270 or MAT 290 with a grade of D or greater
GLG	**321**	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisites: CHM 113 and (MAT 270 or MAT 290); Pre/Co-requisite: CHM 116
GLG	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only BIO or GLG 325
GLG	**362**	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**400**	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	P/F	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in geological sciences. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	C	
GLG	**404**	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**405**	Geology of the Moon	Current theories of the origin and evolution of the moon through photogeological analyses and consideration of geochemical and geophysical constraints. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**406**	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**410**	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	Pre-requisites: GLG 101 or SES 101 with C or better
GLG	**412**	Geotectonics	Earthquakes, Earth's interior, formation of oceanic and continental crust, and plate tectonics. Emphasizes current work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better
GLG	**416**	Field Geophysics	Methods of applied geophysical exploration; seismic refraction, gravity, electrical resistivity, geomagnetics. Includes survey planning, data acquisition, processing, analysis, and interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**418**	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better; MAT 272 (or MAT 267); PHY 131
GLG	**419**	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: PHY 131
GLG	**420**	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**424**	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 321 with C or better
GLG	**430**	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 102 (or SES 102) with C or better; GLG 104 (or SES 104)
GLG	**435**	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 102 and GLG 321 with a grade of C or greater
GLG	**441**	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**451**	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	**452**	Field Geology II	Continuation of GLG 451. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 451 and GLG 321 with C or better; MAT 270 or MAT 290 with C or better
GLG	**455**	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona. May be repeated for credit. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		
GLG	**456**	Cordilleran Regional Geology	Systematic coverage through space and time of the geological development of western North America, emphasizing the western United States. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GLG	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**470**	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**490**	Topics in Geology	Special topics in a range of fields in geology. Fee.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
GLG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**495**	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
GLG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**500**	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**501**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**504**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**510**	Advanced Structural Geology	Mechanics of rock deformation, emphasizing relationship among field observation, theory, and experiment. Stress, strain, simple constitutive relationships, failure criteria, and the basis of continuum methods. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**520**	Advanced Physical Volcanology	Selected volcanologic topics, including explosive eruption processes, lava flow mechanics, and intrusive mechanisms. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2-3		
GLG	**547**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		You may not enroll in GLG 547 if you have credit in BIO 515, or PAF 547, or SOS 516
GLG	**581**	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**582**	Physical Geochemistry	Applies thermodynamic and kinetic principles to geochemical processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

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GLG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ & G	

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GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG & G	
GPH	**111**	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants. Credit is allowed for only GPH 111 or 411. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**210**	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**211**	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**212**	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SQ	
GPH	**213**	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SG	
GPH	**214**	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SQ	
GPH	**215**	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SG	
GPH	**271**	Maps and Map Reading	Map types, uses, limitations, and evolution. Communication via paper and digital medium. Navigation, interpretation, projections, sources, symbols, classification, case, handling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**314**	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & G	
GPH	**370**	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**371**	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**372**	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**373**	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	CS	Pre-requisite: GPH 370 with C or better
GPH	**381**	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	

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GPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**401**	Topics in Physical Geography	Open to students qualified to pursue independent studies.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in discpline. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	
GPH	**405**	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**409**	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**410**	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**411**	Physical Geography	Introduces physiography and the physical elements of the environment. Credit is allowed for only GPH 411 or 111.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**412**	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111, MAT 270, PHY 121, and PHY 122 with C or better
GPH	**413**	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**414**	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**418**	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
GPH	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH or PLB 422
GPH	**433**	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**471**	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**473**	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: Must have completed both GPH 373 and CSE 100 with a grade of C or greater or be currently enrolled
GPH	**474**	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: MAY 271, PHY 131, PHY 132 with C or better
GPH	**475**	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**481**	Environmental Geography	Problems of environmental quality, including uses of spatial analysis, research design, and fieldwork in urban and rural systems.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**483**	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**491**	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		

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GPH	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**511**	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation: emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**533**	Snow and Ice	Processes, distribution, climatic interactions of snow/ice emphasizing mass balance, snow stratigraphy/metamorphism and glacier/snowpack climatology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**573**	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**575**	Geographic Applications of Remote Sensing	Uses imaging and nonimaging methods of remote acquisition of data, including satellite sensors, airborne radar, multiband scanning, conventional photographic sensors, and ground-based equipment.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**596**	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**601**	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals. Module 1 of the fall semester for MAS-GIS professional degree program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**602**	Intermediate GIS	Intermediate GIS for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**603**	Spatial Statistics and Modeling	Spatial statistics and modeling for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**604**	Implementation in the Corporate and Public Sectors	Uses GIS in the corporate and public sectors. GIS ethics. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**605**	GIS Project: Real-World GIS Project Planning and Implementation for Public Sector Agencies	GIS project development for the public sector. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**606**	Gis Project Presentation	Mastering technical project presentation for GIS professionals. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**610**	Programming the GIS Environment	Programming the GIS environment for the MAS-GIS program. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**620**	Remote Sensing	Remote sensing for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**630**	Air Photo Interpretation for MAS-GIS	Air photo interpretation for the MAS-GIS program. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**640**	GIS for Business	Uses GIS in business for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**650**	GIS for the Internet	GIS for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GPH	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GRA	**101**	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites:Students may not enroll in GRA 101 if they received a D or better in GRA 440. Must be a College of Design student
GRA	**111**	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
GRA	**112**	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 111 with C or better
GRA	**121**	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 111
GRA	**122**	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 121 with a C or better; Co-requisite: GRA 112
GRA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	**220**	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	**221**	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	**222**	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	**223**	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	**224**	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	**225**	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**321**	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 361
GRA	**322**	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	**345**	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Graphic Design, Architecture, Interior Design, Industrial Design, Housing Community Development or Design Studies BA; ENG 102, 105 or 108 with C or better
GRA	**361**	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	**362**	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**401**	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**421**	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	**422**	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	**423**	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422
GRA	**424**	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422 with C or better
GRA	**440**	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Students may not enroll in GRA 440 if they received a D or better in GRA 101
GRA	**461**	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	**462**	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
GRA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
GRA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
GRA	**526**	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**561**	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**562**	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the syntheis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: DSC 561 with C or better
GRA	**563**	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**581**	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
GRA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Graduate College	1.		
GRD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
GRD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRK	**101**	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GRK	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GRK	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**201**	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: GRK 101 with C or better
GRK	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**301**	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 201 with C or better
GRK	**302**	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 301 with C or better
GRK	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
GRK	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GRK	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	**501**	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**503**	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**505**	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**506**	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GTD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		
GTD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
GTD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
HCR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**210**	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisite: ENG 102,105 or 108
HCR	**220**	Introduction to Nursing and Healthcare Systems	Introduces the social, political, and economic contexts in which the nursing profession and healthcare systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	H	
HCR	**230**	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	C & G	
HCR	**240**	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate Nursing students; BIO 201, BIO 202, CHM 101 or higher, MIC 205 and MIC 206 with C or better
HCR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**550**	Principles of Epidemiology for Healthcare	Introductory graduate-level course intended to provide students with fundamental epidemiology concepts and methods which can be applied to their field of interest.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**561**	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**562**	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**563**	Clinical Research Management and Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**564**	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	**565**	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**566**	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**567**	Applied Cost-Effectiveness Analysis in Intervention Research	Principles and methods of cost-effectiveness analysis and the application to interpreting clinical trial and sociobehavioral intervention results	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or any graduate nursing program; HCR 561 and HCR 565 with D or better
HCR	**568**	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or certificate program
HCR	**569**	Applied Principles of Data Management & Inferential Statistics in Healthcare Research	Applied principles of data management and inferential statistics in epidemiological, psychosocial, medical, nursing, and healthcare research. Seminar. Prerequisites: DNP 679; HCR 572; NUR 609; admission to Clinical Research Management Certificate(NUCRGRCC) or master's program (NUCRMMS), any graduate nursing program.	N	SEM	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Certificate or Master's program or any graduate Nursing program; NUR 609, DNP 679 and HCR 572 with D or better
HCR	**570**	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCR	**571**	Cultural Diversity in Clinical Practice	Introduces culturally diverse aspects of clinical care, including culture bound syndromes folk practices, appropriate assessment approaches, and client/provider interaction.	N	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**572**	International Health Capstone Project	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
HCR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HCR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HDA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7		
HDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
HEB	**102**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: HEB 101 with C or better
HEB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**201**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 102 with C or better
HEB	**202**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 201 with C or better
HEB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HEB	**313**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 202 with a grade of C or greater or be currently enrolled
HEB	**314**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 313 with a grade of C or greater or be currently enrolled
HEB	**375**	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
HEB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
HEB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
HEB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
HED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
HED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**510**	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-4		
HED	**527**	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**602**	Institutional Research/Strategic Planning	Provides an overview of policy research and planning in higher education at the campus system and governing/coordinating agency levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**611**	Curriculum and Instruction	Curriculum development, instructional organization, and improvement of instruction in higher education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**620**	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**634**	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**644**	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**649**	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
HED	**679**	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**687**	Governance, Coordination, and External Influences in Higher Education	Study of governance and coordination in higher education systems and the impact of external forces on them.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**688**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**689**	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	**701**	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**702**	Critical Policy Issues In Higher Education	How great expectations in Washington are dashed in Oakland, Pressman and Wildavsky (1984) state that "policies imply theories--Whether stated explicitly or not, policies point to a chain of causation between initial conditions and future consequences." Policy can be broadly defined as a principal, plan, or course of action undertaken by governments, organizations, or individuals and designed to influence and determine decisions and actions. Many assumptions made by policy makers and other constituencies as well as competing social and political considerations shape the development of policy in higher education. Given the importance of federal and state public policy-making to higher education, we examine the effect of public policy on the functioning of colleges and universities and explore the various facets of public policy issues. Examines critical policy issues for higher education and the assumptions underlying their development.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**703**	Institutional Research and Evaluation in Higher Education	Higher education professionals (e.g., administrators, faculty, and researchers) are expected to develop an understanding of and appreciation for the role of research, analysis, and evaluation. Institutional research and evaluation are important functions in the advancement of colleges and universities. These functions help to maintain efficacy within educational organizations by providing vital data and analysis used in planning, decision-making, and policy development. Designed to develop a deep understanding of the contextual and practical applications of research and evaluation within higher education institutions. Students develop skills and execute techniques that are critical to conducting institutional research and evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**704**	Qualitative Case Study Approaches For Policy Research In Higher Education	Provides advanced graduate students with instruction in qualitative case study research approaches as applied to questions of higher education policy. Emphasizes individual and group interviewing as techniques for qualitative case study data collection, coding, and analysis. Particularly useful for advanced doctoral students who plan to conduct a qualitative dissertation related to a higher education policy topic.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**705**	Ethics, Diversity, and Educational Leadership in Higher and Postsecondary Education	Students read and discuss recent writings on ethical decision making as related to the context of higher and postsecondary education. According to Shapiro & Gross (2008), "educational leaders have always had to make important decisions that affect the studies and lives of the next generation." St. John (2009) underscores the importance to ethical practice of understanding critical higher education issues in organizational practice, the gaps between moral beliefs and actions, and improving equity in organizations. Doctoral students review theoretical concepts related to ethical decision making and apply them to moral dilemmas in higher and postsecondary education leadership, policy-making, and organizational change.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	**707**	Higher Education Institutional Types and Innovative Initiatives	Students gain an in-depth understanding of the various types of higher and postsecondary education institutions in the United States, including two-year and four-year colleges and universities, historically Black colleges and universities (HBCU's), Hispanic-serving institutions (HSI's), tribal colleges, women's colleges, faith-based colleges, and for-profit colleges. Covers current classification system used to group each institutional type. Examines the contribution of each institutional type to the development of American higher education, their current status, and potential futures. Studies exemplary programs, within various institutional contexts, that seek to address the academic needs of diverse student communities. Guest speakers and an out-of-state institutional site visit provide opportunities for students to interact with and learn from faculty and administrators within institutional contexts.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HES	**301**	Adult Fitness I	Physical fitness and benefits of exercise. Emphasizes fitness assessment and designing an individualized assessment program. Y/E grade only. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Credit is allowed for only HES 301, EPE 301,325, 494, HES 301or HES 494
HES	**302**	Adult Fitness II	Continuation of HES 301. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 completed with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 302
HES	**303**	Adult Fitness III	Continuation of HES 302. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 with Y grade; HES 302 with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 303
HES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
HHE	**510**	Theory of Healthcare Design	Theoretical problem solving and practical application strategies used in the design of healthcare and healing environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**524**	Contemporary Issues in Healthcare Design	Address contemporaneous healthcare design issues and challenges and propose theoretical solutions through evidence-based research. Seminar.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: HHE 510 and HHE 540 with B or better
HHE	**540**	Healthcare Design Typologies: Case Studies	Industry best practices and benchmarks for various types of hospital facilities and healthcare systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

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HHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**591**	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHS	**100**	Introduction to Holistic Health	Studies holistic health in a bio-psycho-socio-cultural context for health promotion and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HHS	**300**	Overview of Complementary Health Systems	Identifies and describes major approaches to complementary health models in the context of holistic health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**494**	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Honors students only; Total earned hours must be equal to or less than 60
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**274**	The Human Event: Social Science Focus	Continuation of HON 171 from the Renaissance through the modern period; emphasizes the development of the social sciences.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or SB) & H	Pre-requisite: HON 171 with C or better
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HON	**298**	Honors Directed Study		N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**310**	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**317**	Philosophers, Poets, and Revolutionaries in Latin America	A transdisciplinary honors course that introduces students to major intellectual currents in three regions of Latin America.	N	DIS	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**366**	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	FLD	Y	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**371**	Freedom and Authority	Historical overview of concepts of liberty, responsibility, and power in Western societies, emphasizing 18th- to 20th-century developments.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**372**	French Cultural Influences	Explores textual and cultural artifacts formative of French culture as a series of contacts and conflicts with other peoples and lifeways.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & G	
HON	**373**	Heroes, Heroines, and Villains	Examines concepts of heroic and villainous characteristics as expressed in the literature and visual arts of various cultures throughout history.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**374**	Black and White Atlantic	Examines development (18th- to 20th-century) and cultural manifestations of Black/White race relations within the U.S. and between the U.S. and other nations.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**375**	Science and the Modern Self	Concentrates on texts of the 19th and 20th centuries; explores how scientific discourse determines our notions of self.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**376**	Law, Literature, and Life	Multidisciplinary approach to the subject of law, examining it through literature, history, and legal philosophy.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	Pre-requisites: Honors students only
HON	**378**	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & H & G	
HON	**379**	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**410**	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-12		Pre-requisite: Barrett Honors student
HON	**485**	Biosphere 2; Study Opportunity	For students participating in the ASU-sponsored program at Biosphere 2.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-18		
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisite: Honors students only
HON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-7		Pre-requisites: Honors students only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-15		
HPS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**311**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU or SB	
HPS	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	**322**	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**323**	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**325**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H & G	
HPS	**330**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	
HPS	**331**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
HPS	**332**	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**336**	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SB & H	
HPS	**340**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with C or better: BIO 187 (or both PLB 200 and PLB 201) and BIO 188. Students with credit for BIO 311, may not enroll in HPS 340
HPS	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**402**	Technology, Society, and Human Values	Values that motivate humankind to create technology. Areas of conflict and resolution of conflict between values and technology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**410**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
HPS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
HPS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
HPS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
HPS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**512**	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**513**	Decisions and Strategies	Explores topics in decision theory, game theory, social choice theory, epistemology, and related fields. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**550**	Methods in History and Philosophy of Science	Introduces current methods in the practice of history and philosophy of science. Organized around major historiographical schools in the history of science such as social, institutional, intellectual, cultural, or feminist history of science and current concerns in philosophy of science such as causation, explanation, modeling, and epistemology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**610**	History and Philosophy of Science Lab	This course brings together graduate students, postdocs, and faculty members in HPS. Sessions include panel discussions of HPS topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
HPS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
HSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**300**	Complementary Healthcare	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: HSC 210 with D or better
HSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	GRD	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		
HSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSD	**501**	Theories of Science and Democracy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**502**	Analysis of Knowledge and Expertise in Policy Decisions	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**503**	Analysis of Scientific and Technological Innovation	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Graduate College	Graduate College	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSD	**504**	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
HSD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
HSD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		
HSD	**601**	Core Seminar I	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**602**	Core Seminar II	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**610**	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions. May be repeated for credit for a total of 6 hours.	N	SEM	Y	OPT	Graduate College	Graduate College	1.		
HSD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Graduate College	Graduate College	1-12		
HSD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-15		
HSM	**220**	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	H	
HSM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**493**	Honors Thesis		N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
HSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**502**	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**505**	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 561 with D or better
HSM	**512**	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**522**	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**542**	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**561**	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**564**	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**565**	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**566**	Managerial Epidemiology II	Basic principles of epidemiology, evaluation of etiology, natural history, intervention therapy, and disease prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**575**	Health Policy Management and Evaluation	Provides students with the analytical techniques and real world experience to manage the implementation and evaluation of changes in health policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**578**	Managing Clinical Trials	Introduces students to theoretical and practical aspects of randomized controlled clinical trial methodology.	N	LEC	N	GRD	W.P. Carey School of Business	Department of Economics	3.		Pre-requisite: HSM 505
HSM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**589**	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		

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HSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**105**	Slavic Civilization	Development of Slavic cultures and societies from medieval Byzantium to the present; introduces modern Eurasia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**106**	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**108**	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**200**	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**201**	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**202**	Historical Themes in Europe	General introduction to selected themes in European history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	

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HST	**211**	American Jewish History	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**302**	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**303**	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**304**	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**305**	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**306**	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**307**	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**310**	Film as History	Surveys moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
HST	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**316**	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**321**	Constitutional Hist/US to 1965	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**323**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**329**	Women in 20th-Century US West	Examines how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H & C	
HST	**330**	Mexican Women in the U.S.	Overview of Chicana history from Mesoamerican origins to the present, focusing on Mexican women in the western U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**333**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**347**	Ancient Greece	History and civilization of the Greek world from 650 BCE to the death of Alexander the Great.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**348**	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**349**	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**350**	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**351**	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	

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HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**353**	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**354**	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**356**	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**357**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or ENG 105, or ENG 108, with a grade of C or better, or be currently enrolled
HST	**358**	Jewish History from the Bible to 1492	Continuity and change in political, legal, economic, and sociocultural history of the Jews from biblical through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**359**	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**366**	England to 1689	Political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**367**	Modern Britain	Political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**370**	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**371**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**372**	Modern Middle East	Impact of the West and modernization upon Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**376**	Modern Latin America	Nationalistic development of the independent republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**377**	Women in Colonial Latin America	History of women in colonial Latin America, cross-examining class, race, and gender relations in depth.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**378**	Latin American Women: The National Period	Surveys the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	

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HST	**379**	Rebellion & Revolution/So Amer	Political, economic, and social development of Spanish-speaking nations in South America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**380**	Cultural History of Latin America	Main currents of thought, the outstanding thinkers, and their impact on 19th- and 20th-century Latin America. Cultural and institutional basis of Latin American life.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**381**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
HST	**383**	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**384**	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**385**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**386**	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**387**	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**388**	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**389**	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**391**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**405**	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**407**	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**409**	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**410**	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**411**	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**412**	Contemporary U.S., 1973- Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**414**	The Modern U.S. Economy	Origins of 19th-century slavery and industrialization; 20th-century crisis and regulation: political economy of an advanced capitalist democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	

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HST	**417**	Topics in Mexican American History	Focuses on specific topics in Mexican American history including immigration, civil rights, the Chicano Movement, union activism, and regional and generational differences.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**423**	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**424**	Stuart Transform of England	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**426**	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**427**	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**428**	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**429**	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**430**	Hitler: Man and Legend	Biographical approach to the German Third Reich emphasizing nature of Nazi regime, sociocultural issues, World War II, and historiography.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**431**	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**432**	East Euro/ the Balkans-20 Cent	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**435**	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**436**	The Soviet Experiment	Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former USSR.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**438**	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**443**	The United States & Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**445**	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**446**	Colonial Mexico	Political, economic, social, and cultural developments from pre-Columbian times to 1810.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**451**	Chinese Cultural History	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**452**	Chinese Cultural History	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**453**	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	

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HST	**455**	The United States and Japan	Cultural, political, and economic relations in the 19th and 20th centuries. Emphasizes post-World War II period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
HST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**496**	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper. Course themes may vary by instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: For South Asia track: REL 294, or SGS 294 (topic:Intro to South Asia) with C or better; for SE Asia track: HST 240,REL240, ASB 240, GCU 240, POS 240, or SGS 240 with C or better
HST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**502**	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**512**	West Civil to the Enlightenmnt	Systematically examines various interpretations of Western civilization from the ancient Middle Eastern civilizations to the European Enlightenment.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**514**	Historians of the U.S.	Study of the history of American historical writing from the early colonial days to the 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**515**	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**525**	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**526**	Historians and Preservation	Preparation of historians for public and private historic preservation programs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**527**	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**532**	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**551**	Comparative Histories--War and Revolution	Comparative field course of the themes of war and revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**554**	Population-Ethnicity/Econ/Migr	Comparative course that explores the impact of social, cultural, or economic changes in the population.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**555**	Comparative Historical Topics	Analyzes a variety of specific social, political, cultural, and intellectual topics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisite: History MA or PHD student
HST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & G & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**340**	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**400**	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**401**	Topics in Comparative History	Comparative history with reference to one or more themes.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**402**	Topics in European Regional and National History	Focuses on the history of specific geographic regions or nations in Europe.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**413**	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H & C	
HST	**418**	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
HST	**419**	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**454**	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G & H	
HST	**464**	Women in Europe to 1750	European women's diverse religious, ethnic, national and economic roles in society, culture, and politics in the pre-modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	Pre-requisites: ENG 102 or 105 with C or better; HIS 101 or 300 with C or better
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-15		
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**444**	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**448**	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better
HST	**449**	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identify, and civil rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**450**	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed either SED 403 or SED 598 with C or better. Credit for HST 481 or HST 535 only
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours

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HST	**530**	Methods of Teaching Secondary History	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 480 or HST 530
HST	**535**	Teaching Secondary Social Studies	Emphasizes secondary educational methods of planning, teaching, and assessing appropriate content in the instruction of social studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 481 or HST 535
HTY	**220**	Introduction to Digital Archives	Familiarizes students with the uses and challenges of digital archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**230**	Introduction to Corporate Archives	Covers principles and techniques for creating and managing corporate archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**246**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Credit is allowed for only ENH 246 or HTY 246
HTY	**310**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
HTY	**312**	History of Science	Examines the beginnings of modern science and traces its development and impact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**314**	History of Computing	Examines the history of computing, including the development of computing devices, and the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**316**	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**320**	History of American Agriculture	Overview of the history of agriculture in America from pre-contact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**325**	History of American Business	The history of American business, including its evolution, structure, and values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108, or ENG 112 with a grade of C or better
HTY	**326**	History of Landscape Design	Examines the history of design traditions and landscaping from the ancient world to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with a grade of C or better
HTY	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102,ENG 105, ENG 108, or ENG 112, with a C or better
HTY	**330**	History of Printing and Media	Examines the history of printing, books, and the development of modern forms of media.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**334**	Archival Preservation and Digital Media	Covers the preservation of digital archival data.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:HTY 220, or HTY 230 with a grade of C or better
HTY	**336**	Editing Historical Documents	Covers the principles and techniques for editing historical document collections.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requsites:ENG 102, 105, 108, or ENG 112, with a grade of C or better, and HST 300 or HTY 301 with a C or better
HTY	**346**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENH 246 or HTY 246 with a C or better or currently enrolled
HTY	**350**	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**360**	Women and Science	Examines the role of women in the sciences, focusing on their achievements, challenges, barriers, and persistence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**370**	History of Collecting	Historic overview of the practice of collecting art, artifacts, specimens, memorabilia. Includes classification and display systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**374**	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**410**	Historic Preservation	Major topics of historic preservation, such as legislation, education. Includes principles of preservation and interpretation of artifacts and structures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better; AND HST 300 with a C or better
HTY	**450**	History of Ecology and Conservation	Examines the historical development of ecology and conservation movements in the United States and the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: HTY 301 with C or better or currently enrolled; Senior academic level
HUD	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpment student
HUD	**201**	Introduction to Housing and Urban Development	Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and non-profit practitioners.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**301**	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		

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HUD	**302**	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**361**	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	**362**	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	**363**	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 301; HUD 361
HUD	**364**	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**401**	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**402**	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**403**	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**461**	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	**462**	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	**463**	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	**464**	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 402; HUD 462
HUD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Housing & Urban Develpmnt BSD student
HUD	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
HUD	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
HUD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
HUM	**502**	Writing Cultures	Theories and methods of representing Western and non-Western cultures in literature, history, ethnography, and pictorial media.	N	LEC	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**503**	Research and Writing in the Humanities	Systematic training in humanistic research and writing with particular attention to the interdisciplinary study of culture.	N	SEM	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)

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HUM	**513**	Interpretation ofCultures	Methodologies and comparative theories for the study of relationships among various aspects of culture, the history of ideas, and the arts. May be repeated for a total of 6 semester hours when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Must be a Graduate student.
HUM	**530**	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Division of Humanities T	1.		
HUM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**413**	Comedy: Meaning and Form		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IA	**102**	Wood Turning		Y	LEC	Y	CNV	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
IAP	**101**	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**102**	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	STO	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**103**	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**104**	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**105**	Foundations I: Fundamentals of Interdisciplinary Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary arts application.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	
IAP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**201**	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**202**	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**301**	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**302**	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**303**	Artists and the Contemporary American Experience	Explores the life of the contemporary American artist with respect to individuality, pluralism, gender, race, ethnicity, and regionalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	**304**	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**305**	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**306**	Extended Traditions in Drawing	Explores alternative methods of rendering the drawn image. Emphasizes incorporating other art forms to inform students' individual work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**307**	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAP	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**321**	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: mus be in Plan ASIAPBA
IAP	**322**	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Pan ASIAPBA
IAP	**323**	Music and the Visual Arts	Histories and theories of music and visual arts with emphasis on convergences within 20th-century avant-garde traditions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**324**	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**325**	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Plan ASIAPBA
IAP	**331**	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**332**	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in Plan ASIAPBA
IAP	**333**	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Plan ASIAPBA
IAP	**334**	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**335**	Vocalization and Movement	Study, application, and coordination of vocal projection techniques with bodily movement competencies in presenting original and existing contemporary performance works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**347**	Movement in Education	Theory and practice of teaching dance and creative movement in schools, K-12. Open to all students.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**351**	Concept, Image, and Text	The generation of images and metaphors using various media and visual stimuli.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**352**	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**354**	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**355**	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**356**	Spatial Impressions	Investigates 3-D forms, the processes and concepts of physicality, and the environment with readings on spatial perception and cultural objects. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in PLAN ASIAPBA
IAP	**360**	IAP Laboratory	Provides instructor-student contact time focusing on the technical instruction of media and technology applications.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
IAP	**361**	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	Pre-requisites: must be in PLAN ASIAPBA, or ASACOBS
IAP	**363**	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**364**	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in PLAN ASIAPBA
IAP	**365**	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in Plan:ASIAPBA OR Plan: ASACOBS

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IAP	**368**	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**371**	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**373**	The Critical Artist	Focuses on artists' critical thought, theorizing, and representation of art across disciplines and genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**421**	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work. Fee.	N	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in PLAN:ASIAPBA
IAP	**422**	Contemporary Orchestration Practices	Traditional and experimental scoring techniques for small and large ensembles using MIDI technology, digital samplers, and traditional instruments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN: ASIAPBA
IAP	**431**	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in PLAN: ASIAPBA
IAP	**433**	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN: ASIAPBA
IAP	**434**	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:Must be in PLAN:ASIAPBA
IAP	**441**	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA
IAP	**442**	Movement and Music	Surveys ways artists have brought together movement and music in artistic creations in various disciplinary and interdisciplinary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**452**	Elements of Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**454**	New Directions in Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**457**	Urban Narrative	Conceptually based studio focusing on artists' voices in contemporary urban environment with readings on spatial perception and cultural objects. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**464**	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**465**	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**466**	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN:ASACOBS
IAP	**467**	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**468**	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN: ASACOBS
IAP	**469**	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**471**	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**472**	Theories of Arts and Performance	Key texts, thinkers, concepts, and approaches to the arts and performance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**473**	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**474**	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**480**	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-6		
IAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
IAP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**220**	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAS	**300**	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	**305**	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
IAS	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater, or be currently enrolled, or co-enrolled with IAS310.
IAS	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAS	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 406 or PHI 406
IAS	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**410**	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	**415**	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**416**	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better

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IAS	**430**	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	**477**	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisite: ENG 101 or 105 with C or better
IAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
IAS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IBC	**602**	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**604**	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**608**	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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IBC	**609**	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiolgical processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**660**	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBC	**704**	Evidence-based Behavioral Interventions I: Core Skills	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**706**	Evidence-Based Behavioral Interventions II: Advanced Skills	Cover advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Focuses on both advanced behavioral interventions theory and practice and more complex diagnostic groups and related interventions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**712**	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

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IBC	**714**	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**718**	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**720**	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**728**	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IBS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IDN	**101**	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
IDN	**102**	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: IDN 101 with C or better
IDN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	**201**	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 102 with C or better
IDN	**202**	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 201 with C or better
IDN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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IDN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
IED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**401**	Navajo Language and Culture I	History and culture are added components to the introduction of language reading, writing, and speaking. Emphasizes basic communication and appreciation of history and culture.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**403**	Navajo Language and Culture II	Emphasizes communication, grammar, and sentence structures. Translations, reading, writing, and discussions of proper and slang language. Includes cultural activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**410**	History American Indian Educ	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 410 or 510.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB & H & C	Pre-requisites: Students who have credit for IED 510, may not enroll in IED 410
IED	**430**	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 430 or 530.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C	
IED	**433**	Counseling the Indian Student	Techniques and methods used in counseling, with emphasis on understanding Indian cultures and values. Experimentation with new counseling concepts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**444**	Govt Role-Native Ed Pol/Adm	Examines the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty as they have shaped American Indian education. Analyzes administrative practices and personnel, program and fiscal management, and resources as they reflect the historic and present influence of this triad of factors. Credit is allowed for only IED 444 or 544.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
IED	**460**	Yaqui History and Culture	Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family, traditions, community, resistance, dispersion, and survival.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C & H	
IED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
IED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
IED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		

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IED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**510**	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 510 or 410.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student. Students who have credit for IED 410, may not enroll in IED 510
IED	**530**	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 530 or 430.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**544**	Govt Role-Native Ed Pol/Adm	Examines American Indian education and how it is impacted by the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty. Credit is allowed for IED 544 or 444.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	**100**	Introduction to Engineering Design	Introduces industrial engineering design; teaming, the profession of engineering, computer models in engineering communication skills; quality and customer satisfaction. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	2.		Pre-requisites: Freshman or Sophomore standing
IEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**210**	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: IEE 100(or BME100,CHE100,CEE100,CSE101, ECE100,EEE101,EGR101,FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	**220**	Business/Industrial Engr	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering student; Introduction to Engineering course with C or better (or ECE 100); Minimum Sophomore standing
IEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**300**	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Prerequisites: FSE BS/BSE OR Non Engnr with a min GPA of 3.00; MAT 265, 270 or 290 with a D or greater or currently enrolled; BME 100, CEE 100, CHE 100, CSE 101, ECE 100, EEE 101, IEE 100, MAE 100 or MSE 100 with a D or greater or be currently enrolled
IEE	**305**	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: CSE 200 or 205 completed with a D or better or currently enrolled; Must either be an Engineering BS/BSE student or must be a Non-Engineering students with a minimum GPA of 3.00
IEE	**368**	Facilities Analysis and Design	Planning, analysis, and design of the tangible physical assets of the firm. Emphasizes facilities location, materials handling, automation, computer integration, and utilization of financial resources. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: IEE 300 completed with a grade of D or better or currently enrolled; Must be either an Engineering BS/BSE student or a Non-Engineering student with a minimum GPA of 3.00.
IEE	**369**	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE students only and a grade of D or better or currently enrolled in IEE 300.
IEE	**376**	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: CSE 200 or CSE 205; MAT 242, 342, or 343
IEE	**380**	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Engineering student; MAT 266 or 271 with C or better
IEE	**382**	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Industrial Engineering BSE student; Co-requisite: IEE 380
IEE	**385**	Engr Statistics - Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE/MS/MSE/PHD student; IEE 380 with C or better or ECE 380 with D or better
IEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**405**	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering BS or BSE student
IEE	**431**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 431 or 541.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be a senior Engineering BS/BSE student.
IEE	**437**	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines. Credit is allowed for only IEE 437 or 547.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE students OR Non Engineering students with a minimum GPA of 3.0
IEE	**461**	Production Control	Techniques for the planning, control, and evaluation of production systems. Project management, forecasting, inventory control, scheduling, enterprise requirements planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering BS/BSE student AND have completed with a D or better IEE 376 or IEE 476 AND have completed ASE485, IEE 385 or IEE 485 with a grade of D or better AND have completed CSE 100 or CSE 110 with a grade of D or better.
IEE	**463**	Computer-Aided Manufacturing and Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning, and robotics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Must be an Engineering BS/BSE student with Junior or Senior standing
IEE	**470**	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Industrial Engineering BSE student; IEE 376 completed with a C or better or currently enrolled; IEE 385 completed with a C or better or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	**474**	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: IEE 380 with C or better
IEE	**475**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	4.	CS	
IEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**490**	Project in Design and Development	Individual or team capstone project in creative design and synthesis. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE Senior; IEE 475; IEE 376 or IEE 476 with C or better
IEE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Pre-requisites: Must be an Honors student.
IEE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Pre-requisites: Must be an Honors student
IEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**505**	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**511**	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**512**	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**520**	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**530**	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**532**	Management of Technology	Topics include designing a technical strategy; technological forecasting; interfacing marketing engineering and manufacturing; designing and managing innovation systems; creativity; application of basic management principles to technology management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**533**	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**534**	Supply Chain Modeling/Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**535**	Intro Intnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**541**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 541 or 431.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student.
IEE	**543**	Cmptr-Aided Manufact/Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning and robotics. Credit is allowed for only IEE 543 or 463.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.

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IEE	**545**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Credit is allowed for only IEE 545 or 475.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be Engineering graduate student.
IEE	**547**	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors. Credit is allowed for only IEE 547 or 437.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**552**	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better or co-enrolled in IEE 545, IEE 561, or IEE 574.
IEE	**553**	Information Systems Assurances	Develops and applies engineering approaches to assuring the security of enterprise information systems, including principles of dependable information systems, technologies for information systems, intrusion detection, system response, and recovery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate Engineering student; IEE 505 with a C or better
IEE	**560**	Object-Oriented Info Systems	Applies object-oriented technology and concepts to enterprise information systems. Topics include requirement analysis, object-oriented design and programming, rapid application development, object data management, and development of object-oriented distributed applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have a grade of C or better in IEE 505 or be currently enrolled.
IEE	**561**	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**562**	Computer-Aided Mfg-CAM Tools	Current topics in automation, distributed control, control code generation, control logic validation, CAM integration, CAD/CAM data structures, planning for control systems. Topics vary by semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have completed IEE 463 or IEE 543 with a grade of C or better or be currently enrolled.
IEE	**563**	Distributed Info Systems	Introduces concepts and technologies that form the core of distributed enterprise information systems. Topics include client-server architectures, distributed objects and paradigms, Internet, World Wide Web, distributed information sharing, network programming, and e-commerce and enterprise applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS/MSE/PHD student; IEE 505 with C or better
IEE	**564**	Planning -Cmptr-Integrated Mfg	Theory and use of IDEF methodology in planning for flexible manufacturing, robotics, and real-time control. Simulation concepts applied to computer-integrated manufacturing planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**565**	Cmptr-Integrated Mfg Research	Determination and evaluation of research areas in computer-integrated manufacturing, including real-time software, manufacturing information systems, flexible and integrated manufacturing systems, robotics, and computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better in IEE 564.
IEE	**566**	Simulation in Manufacturing	Uses simulation in computer-integrated manufacturing with an emphasis on modeling material handling systems. Programming, declarative, and intelligence-based simulation environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**567**	Simulation System Analysis	Simulation modeling of processes involving discrete and continuous system components. Topics include random number generators, output analysis, variance reduction, and statistical issues related to simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**570**	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**571**	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**572**	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**573**	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**574**	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Industrial Engineering MS, MSE or PhD student

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IEE	**575**	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**576**	Analy Semiconductor Mfg Oper	Applies operations research and statistical methods to solve problems that involve semiconductor manufacturing operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**577**	Adv Information System Oper	Industrial engineering knowledge and skills for information system operations, includidng aspects (security,quality of service, user interface, information modeling), problems, and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 505 with C or better
IEE	**578-M**	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**579**	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**581**	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in design of experiements, statistical quality control, and regression analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**582**	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**585**	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**620**	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		

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IEE	**670**	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**672**	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	**677**	Regression/Genrlzd Linear Mod	Theory of linear models including least squares, maximum likelihood, likelihood-based inference. Generalized linear models including Poisson and logistic regression, generalized estimating equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 578 with C or better
IEE	**679**	Time Series Analy/Control	Identification, estimation, diagnostic checking techniques for ARIMA models, transfer functions, multiple time series models for feedback and feedforward control schemes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 579 with C or better
IEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IMD	**564**	Multimedia Applications in Instruction	Utilizes various forms of multimedia and authoring software to create materials and instruction. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**566**	Assessment and Evaluation of Media Applications	Examines a variety of strategies in assessing learning, collecting and evaluating data, and evaluating technology resources for classroom integration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**572**	Media Collection and Development	Explores the identification, selection, acquisition, and evaluation of a collection of library resources for a specific community of users.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**574**	Organization and Administration of School Library Media	Explores the role of the school library media specialist and program as it relates to the educational community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**576**	Social and Ethical Issues in Educational Media	Examines the social, ethical, legal, and human issues surrounding the use of technology in K-12 schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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IMD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
IMD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
IMD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
IND	**120**	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student
IND	**121**	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 122
IND	**122**	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; IND 120 with C or better; Co-requisite: IND 121
IND	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**227**	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	**228**	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	**236**	Intro Cmptr Model-Indust Dsgn	Computers in industrial design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; Passed Milestone
IND	**242**	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**243**	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**260**	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	**261**	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	**316**	20th-Century Design I	Modern European and American design from 1900 to 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**317**	20th-Century Design II	Modern European, Asian, and American design since 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**327**	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	**328**	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	**344**	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**354**	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Pre-Industrial Design or Industrial Design BSD student; PHY 111 with C or better
IND	**360**	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	**361**	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**460**	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	**461**	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**470**	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
IND	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
IND	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**544**	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
IND	**548**	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
IND	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**111**	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
INT	**120**	Design Drawing and Media	Visual thinking: Development of freehand drawing techniques as a language and tool to explore, communicate, and process ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student
INT	**121**	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	
INT	**123**	Introduction to Computer-Aided Design of Built Environments	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**131**	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	SB	
INT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**221**	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 120 with C or better; Co-requisite: INT 222
INT	**222**	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Interior Design student; Co-requisite: INT 221
INT	**223**	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	**238**	Intro to CAD	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment. Lecture, lab.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**253**	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 261 with a C or better; Co-requisite: INT 351
INT	**261**	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**310**	History of Interior Design I	Design of interior spaces as an expression of cultural influences to 1835.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: ARS 102 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**311**	History of Interior Design II	Design of interiors as an expression of cultural influences from 1835 to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Must have completed INT 310 with a grade of C or greater or be currently enrolled
INT	**320**	Computer Modeling for Design Studies	Computers in design management, including sofware concepts, specific packages, problem solving, illustration, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**341**	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Corequisites: INT 352, INT 362, and INT 381
INT	**351**	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisite: INT 253
INT	**352**	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 362 and INT 381
INT	**354**	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	**362**	Interior Design Studio II: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 352 and INT 381
INT	**363**	Interior Design Studio III	Explores the poetics of materials and their assemblage in the design of public and private spaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	**364**	Interior Design Studio I	Studio problems in interior design related to behavioral response in personal and small group spaces. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		
INT	**381**	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Urban Planning , Landscape Architecture BSLA, Graphic Design BSD, Interior Architecture BSD, Architectural Studies BSD, Housing & Urban Develpmnt BSD or Industrial Design BSD
INT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**412**	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	Pre-requisite: INT 311 with C or better
INT	**413**	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	FLD	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: INT 412 with C or better
INT	**415**	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Minimum Junior standing
INT	**446**	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	**464**	Interior Design Studio IV: Work Environments	Studio problems in interior design-related issues in work environments. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	**465**	Interior Design Studio V: Institutional Design	Advanced interior design problem solving related to institutional facilities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	**471**	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design or Design Studies (Design Mngt) BA student and Senior standing
INT	**472**	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
INT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**513**	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**527**	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**529**	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
INT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**111**	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	

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ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**311**	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**312**	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**315**	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 311, 312 with a grade of D or better, or enrolled, or ITA 314 with D or better or enrolled
ITA	**319**	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ITA 202 with C or better
ITA	**321**	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**322**	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: ITA 202 with C or better
ITA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**413**	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	**420**	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**425**	Italian American Culture	Analyzes representations of Italian American history and culture in several media including literature, film, and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	
ITA	**430**	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarch, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**441**	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**443**	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**446**	Italian Literature of the 18th and 19th Centuries	Goldoni, Parini, Alfieri, the poetry of Foscolo and Leopardi, and the sociohistorical novels of Foscolo, Manzoni, and Verga.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**449**	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
ITA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ITA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**594**	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JHR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	**501**	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**506**	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
JHR	**510**	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**511**	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JHR	**525**	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		
JHR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JMC	**101**	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism courses. A test is offered during the first week of each semester's class so that students who feel they already have a mastery of grammar may attempt to test out.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication student
JMC	**110**	Principles and History of Journalism	Organization, function, and responsibilities of the media and adjunct services. Primary emphasis on newspapers, radio, television, and magazines. Credit is allowed for only JMC 110 or MCO 120.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student
JMC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Journalism and Broadcasting student
JMC	**201**	News Reporting and Writing	Basic news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: ENG 102, 105 or 107 and JMC 110 (or MCO 120) with C or better; JMC major; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
JMC	**301**	Intermediate Reporting and Writing (Print)	Intermediate news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**305**	Online Media	Focuses on the Internet from the perspective of the journalist--the best way to tell a story using words, photos, video, and audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 with C or better; 2.5 cumulative GPA OR Graduate Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	**310**	Public Relations	Theory and practice of publicity, public relations, and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**313**	Introduction to Editing	Copyediting and headline writing. Electronic editing on personal computer terminals. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; 2.50 minimum cumulative GPA; JMC 301 with a C or better or currently enrolled
JMC	**315**	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**320**	Newscast Producing	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video. Students learn how to design, write, and supervise the television newscast. In practical lab experience, students produce a live 30-minute television newscast airing in greater Phoenix. As must be current on news of the day both locally and nationally, and be prepared to supervise other students in the news-gathering process.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites:Journalism major with a 2.50 GPA or higher; completed with a C or better JMC 315 AND JMC 425 or co-enrolled in JMC 315 and JMC 425
JMC	**325**	Multimedia Reporting	Gives students practical experience working in an online, multimedia environment. Helps sharpen skills and gives them a real-world view of how journalism works in the 21st century.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**330**	Television Reporting	Writing, reporting and editing for television. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	**332**	Electronic Media Programming	Programming theory and evaluation, regulation, ethics, and responsibilities and basics of audience psychographics and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 200 (or MCO 200) with C or better; Minimum 2.50 GPA
JMC	**336**	Station Operations	Basic understanding of the operations of a broadcast station. Examines internal organization structure and the relationship between each department.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 200 or MCO 200 with C or better
JMC	**345**	Videography	Develops an understanding of visual storytelling and how to craft a good, compelling story with pictures and sound. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA; JMC 201 with C or better
JMC	**351**	Photojournalism I	Basic camera, lighting, and scanning skills. Discusses ethics. Emphasizes shooting pictures for newspaper assignments on deadline. Students should have a 35mm (film) camera. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC students; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101); Minimum 2.50 GPA
JMC	**366**	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre- requisites: JMC student; JMC 110 with C or better; Minimum 2.50 GPA; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	**402**	Mass Communication Law	Legal aspects of the rights, privileges, and obligations of the press, radio, and television.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 and ENG 102 with C or better; Minimum 56 hours; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**412**	Editorial Interpretation	The press as an influence on public opinion. Role of the editorial in analyzing and interpreting current events.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Prerequisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**413**	Advanced Editing	Theory and practice of newspaper editing, layout and design, picture and story selection. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**414**	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Comm student; JMC 201 with a C or better or be currently enrolled; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); 2.50 cumulative GPA
JMC	**415**	Writing for Public Relations	Development of specific writing techniques for the practitioner in public relations agencies and divisions of major organizations. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**417**	Public Relations Campaigns	Theory, principles, and literature of public relations and how they relate to audiences, campaigns, and ethics.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	**420**	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	**433**	Media Sales and Promotion	Basics of electronic media marketing practices, including commercial time sales techniques and radio/TV promotion fundamentals.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Comm student, JMC 200 (or MCO 200) with a grade of C or greater or be currently enrolled; 2.5 cumulative GPA OR Graduate Mass Communication students
JMC	**437**	Documentary Production	Emphasizes individual production projects of the student's own conception and design utilizing studio, field, and postproduction techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.5 GPA; JMC 345 with C or better OR Graduate Mass Communication student
JMC	**440**	Magazine Writing	Writing and marketing magazine articles for publication. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	**445**	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**451**	Photojournalism II	Emphasizes shooting and Photoshop skills for newspaper and magazine assignments. Film and digital photography, flash and studio lighting. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communications student; JMC 351 with a C or better or currently enrolled; 2.5 minimum cumulative GPA OR Graduate Mass Communication student
JMC	**452**	Photojournalism III	Continued practice in shooting (film and digital) and Photoshop skills for newspapers and magazines. Emphasizes single images, picture stories, editorial illustrations, and portfolio development. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 451 with C or better OR Graduate Mass Communication student
JMC	**460**	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 425 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students
JMC	**465**	Precision Journalism	Advanced reporting methods using Internet research and data analysis tools for beat and investigative stories. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 301 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students
JMC	**470**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**472**	Media Management	Management principles and practices, including organization, procedures, policies, personnel problems, and financial aspects of station management.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; MCO 200 (or JMC 200) with C or better; Minimum 2.50 GPA OR Graduate Mass Comm student
JMC	**473**	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better
JMC	**475**	Television Newscast Production	Writing, reporting, and production of the television newscast. May be repeated once for credit. Fee.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student ; JMC 330 with C or better or currently enrolled; 2.50 cumulative GPA OR Graduate Mass Communication student
JMC	**478**	Cronkite News Service	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student; JMC 301 or JMC 330 with C or better
JMC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
JMC	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
JMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
JPN	**101**	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201,202, 309,310,311,312,313,314,321
JPN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 102 with a C or greater or in progress & may not enroll in class if received a D or better in JPN 202,309,310,311,312, 313,314,321
JPN	**202**	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 201 with a C or greater or currently enrolled
JPN	**206**	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: JPN 101 with C or better
JPN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**301**	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: JPN 202 with C or better
JPN	**302**	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 301 with C or better
JPN	**309**	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 202 with C or better
JPN	**310**	Japanese Oral Communication II	Continued development of oral/aural sills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 309 with C or better
JPN	**311**	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 202 with C or better
JPN	**312**	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 311 with C or better
JPN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**401**	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	Pre-requisites: JPN 302 and SLC 202 with C or better
JPN	**414**	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 with a grade of C or better
JPN	**415**	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 414 with C or better
JPN	**445**	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	**485**	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
JPN	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
JPN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**520**	Teaching of Japanese as a Second Language	Theory and practice of teaching Japanese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 445 or 535
JPN	**543**	Japanese Language and Linguistics	Analysis and discussion of linguistic theories applied to Japanese phonology, morphology, and syntax, including psychological, sociological, and historical aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**585**	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 485 or 585
JPN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
JPN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.	G	

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JUS	**105**	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 105 or 305. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Open to undergraduate students who have not received credit for JUS 305; Justice Studies students must have 56 or less earned hours
JUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites:Must have less than or equal to 25 earned hours
JUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	**200**	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**207**	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**214**	Justice Institutions	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**222**	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	**301**	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**302**	Basic Statistical Analysis in Justice Studies	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the justice area.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	CS	Pre-requisites: Must have completed Intermediate Algebra or higher; Justice Stds student OR 2.0 GPA and 25 earned hours and specific students as determined by Justice Stds Depart. OR 2.0 GPA and more than 56 hours and not be a Justice Stds student.
JUS	**303**	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**305**	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 305 or 105. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**306**	Police and Society	Focuses on community policing; critical inquiry of administrative decision making; perspectives on police-citizen violence; street practices; urban policing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**308**	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**310**	Corrections and Justice	Examines the United States prison condition; types of offenders; issues including drugs, gangs, drunk driving, racial discrimination, and "intermediate" punishments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**311**	Crime, Prevention, and Control	Examines prevention and control of crime by a review of contemporary theories, justice agency procedures, and social policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**320**	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**321**	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**323**	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**325**	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**329**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student

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JUS	**332**	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**335**	Organized Crime	Nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**350**	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**352**	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**360**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**374**	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**375**	Justice and the Mass Media	Surveys the impact of mass media and popular culture on social justice, including criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**382**	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**385**	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 2.00 GPA; minimum 12 semester hours; If Justice Studies student, must be enrolled or earned J-1 Core Status or earned Capstone Status
JUS	**404**	Imperatives of Proof	Issues of evidence, rules of proof, establishing fact and identity in the justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**405**	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**408**	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**410**	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**415**	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**420**	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**422**	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**425**	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**430**	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**432**	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**435**	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**438**	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**440**	Administration and Justice	Diversity issues; procedural justice and service delivery; relationships between state and economic forces, including processes of regulation; state administrative apparatuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**444**	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**445**	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**450**	Alternatives to Incarceration	Investigates various alternatives to incarceration; advantages/disadvantages; major issues including net widening, cost effectiveness, risk assessment, community crime prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**452**	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social ,and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**460**	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**463**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**465**	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**467**	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**469**	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**470**	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: ENG 102, 105 or 108 with C or better; non-JUS or specific students determined by JUS dept; min 56 hours; 2.50 GPA OR prof/capstone undergrad or Justice Studies graduate;Students with credit for REL 482 or POS 473, may not enroll in JUS 473
JUS	**474**	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**477**	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**479**	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
JUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Justice Studies MS or PHD student
JUS	**501**	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**503**	Crime and Social Causation	Theories of deviance and crime as they relate to social policies and specific response of the justice complex.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**509**	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**521**	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**542**	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**550**	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**555**	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**560**	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**570**	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**575**	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**579**	Political Deviance	Seminar examines the politics of deviance by integrating the study of conflict with aspects of social organization, especially state formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**588**	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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JUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**610**	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**620**	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	**630**	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	**640**	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	**650**	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**660**	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student
JUS	**669**	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
JUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
KE	**211**	Chemical Process Calculations		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	2.		
KE	**461**	Process Control		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
KIN	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**101**	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**110**	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		Pre-requisites: Must be a student in one of the following: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology.
KIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
KIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**205**	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**310**	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**334**	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed BIO 201 or ZOL 201 with a grade of C or greater or be currently enrolled; Must have completed BIO 202 with a grade of C or greater or be currently enrolled
KIN	**335**	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 (ZOL 201) and BIO 202, PHY 111, and KIN 101 (or KIN 200) with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with a C or better
KIN	**340**	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200), BIO 201 (ZOL 201) and BIO 202 (ZOL 202) and one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	**345**	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200) with a C or better; PGS 100 or PGS 101 with a C or better; BIO 201 (ZOL 201) with a C or better
KIN	**348**	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**352**	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C	Pre-requisites: KIN 101 (or KIN 200) with C or better; PGS 100 or PGS 101 with C or better
KIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**412**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed KIN 335 with a grade of C or better; If you received credit in KIN 512, you may not enroll in KIN 412
KIN	**413**	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 335 or KIN 335 with a grade of C or greater or be currently enrolled in KIN 335
KIN	**414**	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 335, KIN 335 or PED 335 with a grade of C or greater or be currently enrolled in KIN 335; Must have completed EPE 240, KIN 340 or PED 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**421**	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**423**	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**440**	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 532, may not enroll in KIN 440
KIN	**441**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 531, may not enroll in KIN 441
KIN	**442**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 442 or 536.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater in KIN 340. Credit is allowed for only KIN 442 or 536.
KIN	**443**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or better in KIN 340. Students who have credit for KIN 533, may not enroll in KIN 443

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**444**	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**445**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 445 or 535.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**448**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 520, may not enroll in KIN 448
KIN	**450**	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 352 or KIN 352 with a grade of C or greater or be currently enrolled in KIN 352
KIN	**452**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 522, may not enroll in KIN 452
KIN	**460**	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		Pre-requisites: Must be an Honors student
KIN	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
KIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Academic Level may not equal Freshman
KIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Must be BS Kinesiology student; Seniors only
KIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
KIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**501**	Research Statistics	Statistical procedures; sampling techniques; exercise testing, exercise prescription, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**505**	Applied Exercise Physiology Techniques	Investigative techniques used in the applied exercise physiology lab. Emphasizes pulmonary function, body composition, and cardiorespiratory assessment.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**510**	Introduction to Biomechanics Research Methods	Applies mechanics to human movement analysis. Includes consideration of 2-D imaging techniques, force measurement, electromyography, and data processing methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**512**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512
KIN	**520**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	**521**	Motor Development, Control, and Learning	Theory and research on motor skill acquisition, including learning/control and development (i.e., growth, children and exercise, and development learning).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**522**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	**530**	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**531**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	**532**	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	**533**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**535**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 535 or 445.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**536**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 536 or 442.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking). Students who have credit for KIN 442, may not enroll in KIN 536
KIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**598**	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**610**	Advanced Topics in Biomechanics	3-D imaging techniques, data analysis theory, and integration of biomechanics research tools; includes original research project.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**621**	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KOR	**101**	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and wrtiting skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
KOR	**102**	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:KOR 101 with a grade of D or better, or currently enrolled
KOR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KOR	**201**	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 102
KOR	**202**	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 201
KOR	**250**	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
KOR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**313**	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety or Korean written styles.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 202
KOR	**314**	Third-Year Korean II	Continuation of KOR 313.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 313
KOR	**347**	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
KOR	**350**	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	H	
KOR	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
KOR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
KOR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
KOR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	**485**	International Field Studies in Landscape Architecture	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
LAP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAT	**101**	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
LAT	**102**	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: LAT 101
LAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**201**	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 102
LAT	**202**	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 201
LAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**421**	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**422**	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
LAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
LAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
LAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
LAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**105**	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3.		
LAW	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1.		Pre-requisites: Freshman standing
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	LAW	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**515**	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**516**	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**517**	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**518**	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**519**	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**520**	Contracts	Continuation of LAW 515 focusing on contract interpretation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**522**	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**523**	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**524**	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**526**	Property	Nonpossessory interests in property (easements, covenants, servitudes); nuisance; land use planning; and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**527**	Civil Procedure	Continuation of LAW 518; addressed subjects in LAW 518 in greater depth as well as personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**529**	Law and the Regulatory State	Introduces the importance, origins, and methods of interpreting statutes, regulations, and court rules.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**597**	Visiting Student Program		N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**601**	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**602**	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	**603**	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**604**	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**605**	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**606**	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**608**	Business Associations I	Partnerships, limited partnerships, and small business corporations. Includes a brief introduction to accounting. Detailed analysis of the problems of forming a close corporation, state law duties of care and loyalty, management, dividends and redemptions, issuance of stock, internal dispute resolution, dissolution, and the general law of derivative actions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**609**	Business Associations II	Interrelationship of federal and state law and a brief introduction to corporate finance (1933 Act). Broad overview of large company regulations including reporting rules, proxy regulation, insider trading, sale of control, tender offers and takeovers, and going private.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**610**	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**611**	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Must be College of Law student
LAW	**612**	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**613**	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**614**	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**615**	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**616**	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**617**	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**618**	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**619**	Payments	Law of credit obligations and payment devices. Focuses on Articles 3, 4, and 4A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**620**	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**621**	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**622**	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**623**	Commercial Torts	Involves an analysis of actionable wrongs against a business entity or against proprietary rights held by that entity, covering the entire spectrum of private remedies for competitive wrongs.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**624**	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	**625**	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**626**	Advanced Legal Writing	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Must be Juris Doctor Candidate (LWJDJD); Students who have credit for LAW 634, may not enroll in LAW 626
LAW	**627**	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**628**	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**629**	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**630**	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**631**	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**632**	Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**633**	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**635**	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**636**	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**637**	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	4.		Pre-requisite: College of Law student
LAW	**638**	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student

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LAW	**639**	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**640**	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**641**	Securities Regulation II	Securities laws affecting the purchase and sale of publicly-traded securities.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**642**	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**643**	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**645**	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**646**	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**647**	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**648**	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**649**	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**650**	Health Law	Introduces health law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**651**	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**652**	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**653**	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**654**	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**655**	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**656**	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**657**	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**658**	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre Requisites: Law Students Only
LAW	**659**	Intellectual Property Portfolio Management	Covers business/law dynamics in the technology sector.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**660**	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**661**	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**662**	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**663**	Prisoner Rights	Provides overview and basic understanding of the rights of prisoners within the United States penal system. Emphasizes prisoners¿ civil rights under the U.S. Constitution and 42 U.S.C. Section 1983, including claims such as access to courts, conditions of confinement, religious freedoms, excessive use of force, ineffective medical assistance. Analyzes prison culture and models for reform, state post-conviction rights of appeal, the death penalty, parole, and commutation. Includes optional tour of a maximum security prison (which is much different from the county jail tour) and guest speakers (correctional officers and former inmates).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**664**	Intellectual Property	Surveys the laws conventionally grouped as ¿intellectual property,¿ with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**665**	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**697**	Visiting Student Program		N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**701**	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**702**	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**703**	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**704**	Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**705**	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**706**	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**707**	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**708**	Gender, Sexuality, and the Law	Examines assumptions made in the law about gender and sexuality and the impact of those assumptions on the application of the law.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**709**	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**710**	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**712**	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**713**	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**715**	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**718**	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**719**	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**720**	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**721**	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**722**	Mexican Law	Comparative overview of Mexican law. Poses questions regarding the proper role and function of a legal system.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**723**	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**724**	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**725**	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**733**	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**734**	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**735**	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**736**	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**737**	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group¿s goals. In addition to analyzing the definition of a ¿cult,¿ the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members¿ families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**738**	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**739**	Economics and the Law Seminar	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**745**	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**768**	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**770**	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal. May be repeated for credit for a maximum of 5 semester hours.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**771**	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**772**	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**773**	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**774**	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**775**	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**776**	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**777**	Technology Ventures Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**778**	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**781**	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**782**	Independent Study	See LAW 781.	N	IND	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**783**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**785**	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**795**	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1.		
LAW	**797**	Visiting Student Program		N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	0.		
LDE	**361**	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture students only; Co-requisites: LTC 343
LDE	**362**	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	**363**	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	**461**	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	**462**	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LDE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
LDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GRD	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LES	**305**	Legal, Ethical, and Regulatory Issues in Business	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey BA or BS student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.5 ASU cum GPA, OR be a graduate student.
LES	**306**	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-Requisites:Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	**380**	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR Non degree or Grad student.
LES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	**411**	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
LES	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
LES	**532**	Negotiation Agreements	Develops negotiation competencies to build partnerships and create lasting agreements with internal/external customers, suppliers, work teams, and external constituencies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: MBA student
LES	**579**	Legal and Ethical Issues for Business	Managerial decision making within the bounds of ethics, social responsibility, and legal and regulatory constraints. Strong international focus.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA student
LES	**581**	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**582**	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LIA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
LIA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**301**	International Organizational Behavior	Educates students to lead others in the intra- and interorganizational relationships in multinational firms operating in complex global environments. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management and Leadership student in the Leadership in International Management plan with either a Professional or Conditions status.
LIM	**303**	Negotiation and Conflict Resolution Strategies Across Cultures	Explores the impact of cultural differences on international negotiations and subsequent application of this knowledge to conflict resolution processes. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**401**	Advanced Topics in International Leadership	Provides an overview of the most current leadership theories and practices to develop students as leaders in crosscultural contexts. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
LIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		
LIM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		
LIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**510**	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	**511**	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**513**	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**514**	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		

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LIN	**515**	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**516**	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	**520**	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**521**	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**522**	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**523**	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**524**	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
LIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
LIN	**610**	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**614**	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**615**	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**616**	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**617**	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**620**	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
LIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
LIS	**510**	Computers and Technology in the School Library	Library uses of technology and computers. Fundamental concepts and issues in library media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**533**	Current Library Problems	Critical analysis of current practices and problems in school librarianship.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**540**	Classification and Cataloging	Descriptive cataloging and Dewey Decimal Classification of print and nonprint library materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**561**	Selection of Library Materials	Principles and procedures used in the selection of materials for the school library.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**565**	Literature for Hispanic Youth/Literatura para Jóvenes Hispanoparlantes	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**571**	Basic Reference Resources	Provides reference service in the school library. Content and use of basic resources.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**581**	School Library Administration	Administration of K-12 libraries and media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student

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LIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LNP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**310**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
LPH	**311**	Contemporary Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
LPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**411**	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

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LPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LSC	**241**	Human Genetics	Introduces basic concepts of human heredity and cytogenetics, including Mendelian, molecular, and population genetics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**301**	Life Sciences: History and Method	Integrates philosophy, history, and methods of the life sciences. Includes issue of underrepresentation of minorities in science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**322**	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	**342**	Hormones and Behavior	Examines the short-term and long-term effects of hormones on the behavior of animals, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed BIO 181 or 188 and BIO 182 or 187 with a grade of C or greater or be currently enrolled.
LSC	**347**	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed BIO 181 or 188 and BIO 182 or 187 and CHM 116
LSC	**348**	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: must have completed BIO 187, BIO 188, CHM 113, and CHM 116 with a grade of C or greater and be co-enrolled in LSC 347.
LSC	**350**	Premedical Professional Seminar	An opportunity for students who anticipate a career in any area of medicine to explore the realities of the field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 or 188, BIO 182 or 188, BIO 353 or LSC 353, and BIO 340 or LSC 347 with C or better
LSC	**354**	Developmental Anatomy Lab	Experimental studies of developmental processes in animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**359**	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	**360**	The Biology of Human Experience	Introduces the evolutionary origins and characteristics of humans as they are reflected in morphology, physiology, ecology, and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed BIO187 and BIO188 with a grade of C or greater or be currently enrolled.
LSC	**361**	Human Sexual Biology	Human sexuality from a biological and integrative perspective, including comparisons to other vertebrates and examination of social, behavioral, and physiological factors. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**362**	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**363**	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: BIO 182 (or BIO 187), BIO 181 (or BIO 188), BIO 340 (or LSC 347), LSC 353 and CHM 234 with C or better
LSC	**365**	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**430**	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: must have completed BIO187/182, BIO188/181, and CHM116/115 with a grade of C or greater or be currently enrolled.
LSC	**432**	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed either BIO353, LSC353, or LSC359 with a grade of C or greater or be currently enrolled.
LSC	**434**	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO187 or 182 with C or better; BIO188 or 181 with C or better; LSC 320 or BIO 320 with C or better
LSC	**447**	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		

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LSC	**450**	Premedical Externship	Provides hands-on experience in a hospital setting for premedical students.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: LSC 350 with C or better
LSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**486**	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6		
LSC	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
LSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
LSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
LSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LTC	**343**	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: LDE 361
LTC	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MA	**513**	Algebraic Topology	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAE	**100**	Introduction to Mechanical and Aerospace Engineering	Introduces mechanical and aerospace engineering, design process, teaming, the profession of mechanical and aerospace engineering, computer models in engineering, communication skills, CAD tools, and programming tools. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites: Aerospace or Mechanical Engineering student
MAE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student
MAE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**212**	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mech & Aero student; PHY 121 C or better; Pre/Co-requisite: MAT 274 or 275 C or better OR Non Mech & Aero student; PHY 121; Pre/Co-requisite: MAT 274 or 275
MAE	**213**	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: CEE 210, CEE 211 or MAE 212 with C or better; MAT 274 (or 275) with C or better
MAE	**214**	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	**240**	Thermofluids I	Introductory concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mechanical & Aerospace Engineer or Fulton BSE student with MAE 212 with C or better or Non MAE student with CEE 212 (may be co-enrolled) or MAE 212 with C or better
MAE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**313**	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 318 and MAE 360 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**318**	Sensors and Controls	Introduces measurement systems, feedback control modelling and dynamics of physical systems, computer simulations and real-time experiments. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5.		Pre-requisites: Mech or Aero BSE student; MAE 212 or CEE 211 with C or better; EEE 202 with C or better
MAE	**322**	Structural Mechanics	Three-dimensional stress analysis, failure theories, energy methods, finite elements, torsion of noncircular members, unsymmetrical bending, beam column, fatigue and fracture. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: MAE BS/BSE student; MAE 213 with C or better, MAT 343 with C or better; Pre/Co-requisite: MAE 384 (with C or better if completed)
MAE	**323**	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites; MAE BSE students; MAE 214 with C or better, MAE 322 with C or better
MAE	**340**	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 240 with a C or better; Pre/Co-requisite: MAE 384
MAE	**341**	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; MAE 212 with a C or better
MAE	**342**	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; MAE 322 with C or better; Pre/Co-requisite: MAE 318 (with C or better if completed)
MAE	**344**	Fundamentals of Aerospace Design	Design theory and design tools applied to aerospace engineering. Engineering drawings, solid modeling, RFP's, Federal Aviation Regulations and military specifications, aircraft sizing, rapid prototyping. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 214, 322, 360 and 384 with a C or better
MAE	**345**	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 213 and MAE 384 with C or better; Pre or Co-requisites: MAE 318 (with C or better if completed) and MAE 384 (with C or better if completed)
MAE	**351**	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	**360**	Aerodynamics	Airfoils and wings, ideal flow, panel methods, boundary layers, finite-difference solutions, wind-tunnel testing. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 with C or better; ENG 102, 105 or 108 with C or better; MAE 384 or CEE 384 with C or better or Co-requisite: MAE 384
MAE	**362**	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 and MAE 384 with C or better
MAE	**372**	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 with C or better
MAE	**382**	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students;MAE 240 with C or better
MAE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	CS	Pre-requisites: Engineering BS/BSE student; MAT 274 or 275 with C or better; MAT 242 or MAT 343 (or MAT 342 for Non-MAE student) with C or better; Pre or Co-requisite: MAT 272 or MAT 267 (with C or better if completed);Credit only for MAE 384 or CEE 384
MAE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Engineering BS/BSE student
MAE	**400**	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Aerospace Engineering or Mechanical Engineering BSE Seniors; MAE 342 or MAE 362 completed with a C or better
MAE	**404**	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 or ECE 313 with C or better; CEE 384, MAE 384 or ECE 384 with C or better
MAE	**406**	CAD/CAM Applications in MAE	Solution of engineering problems with the aid of state-of-the-art software tools in solid modeling, engineering analysis, and manufacturing; selection of modeling parameters; reliability tests on software. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-reqsuisites: Engineering BS/BSE students AND a grade of D or better in MAE 342, 344, 441 or 444.
MAE	**415**	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 with C or better; CEE 384 or MAE 384 with C or better
MAE	**417**	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better

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MAE	**426**	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 322 with C or better
MAE	**434**	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 382 with C or better
MAE	**435**	Turbomachinery	Design and performance of turbomachines, including steam, gas and hydraulic turbines, centrifugal pumps, compressors, fans, and blowers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a C or better in MAE 340 or 360
MAE	**436**	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better
MAE	**442**	Mechanical Systems Design	Applies design principles and techniques to the synthesis, modeling, and optimization of mechanical, electromechanical, and hydraulic systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 342 or MAE 344 with C or better
MAE	**446**	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; MAE 382 with C or better
MAE	**447**	Robotics and Its Influence on Design	Robot applications, configurations, singular positions, and work space; modes of control; vision; programming exercises; design of parts for assembly.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**455**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better; Credit is allowed for only MSE 470 or 455
MAE	**462**	Space Vehicle Dynamics and Control	Attitude dynamics and control, launch vehicles, orbital mechanics, orbital transfer/rendezvous, space mission design, space structures, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**463**	Propulsion	Fundamentals of gas-turbine engines and design of components. Principles and design of rocket propulsion and alternative devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 362 with C or better; MAE 384 with C or better
MAE	**465**	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE plans; MAE 340 or MAE 362 with C or better
MAE	**466**	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 360 with C or better; Credit is allowed for only MAE 466 or 566
MAE	**468**	Aerospace Systems Design	Group projects related to aerospace vehicle design, working from mission definition and continuing through preliminary design. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 313 with a C or better; MAE 344 with C or better; Pre-or Co-requisite: MAE 463 with C if completed
MAE	**469**	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student
MAE	**471**	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 or ECE 384 with C or better; Credit is allowed for only MAE 471 or 561
MAE	**480**	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design. Integrated lecture/lab.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; C or better in MAE 214, MAE 345, MAE 465, and EEE 304, or be co-enrolled in EEE 304
MAE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**488**	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in MAE 340 AND a grade of C or better in MAE 342
MAE	**489**	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 488 with C or better
MAE	**491**	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 340 with C or better
MAE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		

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MAE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Pre-requisites: Must be an Honors student.
MAE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Pre-requisites: Engineering students
MAE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**501**	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**502**	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**504**	Experimental Methods for Thermal and Fluid Processes	Theory and application of optical diagnostics and microsensors for characterizing thermofluid processes. Measurements include laser spectroscopy, velocimetry, particle sizing, and surface properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		
MAE	**505**	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	**506**	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 501 with C or better.
MAE	**507**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 506 with C or better
MAE	**510**	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students
MAE	**512**	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisites: Graduate Engineering student; CEE 536, MAE 510 or MAE 515 with C or better or currently enrolled
MAE	**515**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 completed with a C or better or currently enrolled
MAE	**520**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**521**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	**523**	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; CEE 521 or MAE 520 with C or better
MAE	**524**	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 520 with C or better
MAE	**525**	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 with C or better
MAE	**527**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better

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MAE	**536**	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**540**	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**541**	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**544**	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**546**	CAD/CAM Applications in MAE	Solution of engineering problems with the aid of state-of-the-art software tools in solid modeling, engineering analysis, and manufacturing; selection of modeling parameters; reliability tests on software. Open only to students without previous credit for MAE 406.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Graduate Engineering student
MAE	**547**	Mechanical Design and Control of Robots	Homogeneous transformations, 3-D kinematics, geometry of motion, forward and inverse kinematics, workspace and motion trajectories, dynamics, control, and static forces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**557**	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**561**	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only MAE 471 or 561
MAE	**564**	Advanced Aerodynamics	Perturbation method. Linearized subsonic and supersonic flows. Thin wing/slender body theories. Lifting surface theory. Panel method computation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**566**	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressiblilty effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566
MAE	**571**	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**572**	Advanced High-Speed Flows	Introduces compressible flow. Sound waves and normal shock waves. Quasi-one-dimensional steady flows in variable area ducts with friction, heating, and cooling; unsteady one-dimensional flow, oblique shock waves, Prandtl-Meyer expansions, detonation waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**573**	Viscous Fluid Flow	Mechanics of fluids for flows in which the effects of viscosity are significant. Exact and approximate solutions of the Navier-Stokes system, laminar flow at low and high Reynolds number.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 completed with C or better or currently enrolled
MAE	**574**	Fluid Transport in Micro/Nanoscale Devices	Focuses on fundamental fluid transport physics in micron and nanometer scale devices. At small length scales fluid motion and transport is governed by electromagnetic, interfacial, and stochastic phenomena that differentiate these flows from typical macroscale flows. In microscale devices these phenomena enable new and high-performance separation, concentration, control, and diagnostic processes. Core concepts are presented along with discussions of state-of-the-art micro and nanoscale total analytical devices. Requires knowledge of fluid mechanics, electrostatics, heat and mass transfer, and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Fulton School of Engineering graduate students only
MAE	**575**	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**577**	Turbulent Flow Modeling	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**578**	Environmental Fluid Dynamics	Studies fluid motions in Earth's hydrosphere and atmosphere on local and regional scales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**581**	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**585**	Conduction Heat Transfer	Basic equations and concepts of conduction heat transfer. Mathematical formulation and solution (analytical and numerical) of steady and unsteady, one- and multidimensional heat conduction and phase change problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**586**	Convection Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**587**	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**589**	Heat and Mass Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MAE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		
MAE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Graduate Engineering student
MAE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		
MAE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAK	**101**	Elementary Macedonian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**102**	Elementary Macedonian	See MAK 101.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**201**	Intermediate Macedonian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**202**	Intermediate Macedonian	See MAK 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**311**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**312**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**411**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**412**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**501**	Models of Inquiry for Contemporary Issues	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**502**	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**505**	20th-Century Thought: Concepts of Change, Culture and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theoriesm and paradigms in 20th-century thought.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**510**	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for IAS 430, may not enroll in MAS 510
MAS	**511**	Technology, Environment and Humanity	Critically analyzes technology in relation to human and environmental issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**512**	History and Philosophy of the Social Sciences	Examines the development, historical context, and long-term importance of major theories of human nature from the 17th century until today.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**513**	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**529**	Latinas and Latinos, Schooling, and Social Inequality	Advanced interdisciplinary understanding of the issues facing Latinas and Latinos in K-16 schooling in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**553**	Latin American Cities	Interdisciplinary study of Latin American world cities (e.g., Mexico City, Santiago) emphasizing integration with U.S. cities, including Los Angeles and Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**585**	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	THE	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Must be in PLAN: ASINTERMA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Must have completed either MAT 210, MAT 251, MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		

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MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-5		Pre-requisites: ALEKS Math Placement Test with a score of 40% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Must have completed either MAT 210, MAT 251, MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**242**	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or 267 with C or better
MAT	**340**	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**351**	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 270 (or MAT 251 or MAT 265) with C or better
MAT	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MAT	**362**	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 274 (or MAT 275) with C or better
MAT	**370**	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series. Not open to students with a C (2.00) or higher in MAT 371. Credit is allowed for only MAT 370 or 371 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with a C or better
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**372**	Advanced Calculus II	Open, closed, compact sets in Rⁿ continuity, differentiation, partial differentiation, integration in Rⁿ. Inverse/implicit function theorems. Not open to students with credit in MAT 460.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 371 with "C" or better;Co-requisite: MAT 342 (or MAT 343) with "C" or better. Not open to students with credit in MAT 460
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**410**	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) with C or better
MAT	**415**	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or MAT 242 or MAT 343) with C or better C or better
MAT	**416**	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or 242, or 343) with C or better
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110 or CSE 205), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**420**	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 205 and MAT 274 (or 275), and MAT 342 (or MAT 343) with a C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**423**	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 342 (or MAT 343) with a grade of C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**425**	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) with C or better. MAT 371 recommended.
MAT	**442**	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**444**	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 442 or MAT 443 with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**447**	Cryptography	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 100, MAT 300 (or MAT 243) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**451**	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better.
MAT	**452**	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended.
MAT	**460**	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems. Not open to students with credit in MAT 372.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended. Students with credit for MAT 372, may not enroll in MAT 460
MAT	**461**	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or MAT 267 with a C or better
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**472**	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line. Appropriate as preparation for MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**473**	Intermediate Real Analysis II	Analysis in Rn: implicit function theorem, introduction to manifolds, Lebesque integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 472 with C or better
MAT	**475**	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincar-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or MAT 342 or MAT 343) and MAT 274 (or MAT 275) and MAT 370 (or MAT 371) with a "C" or better
MAT	**476**	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or 342 or 343) with C or better; MAT 274 (or 275 or 475) with C or better; MAT 370 (or 371) with C or better
MAT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**485**	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) with C or better
MAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
MAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	**514**	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**515**	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**516**	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**517**	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**518**	Combinatorial Optimization	Systematic development of combinatorial optimization, including linear programming, duality, primal-dual algorithms, network flow algorithms, weighted matchings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**541**	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**543**	Abstract Algebra	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**544**	Abstract Algebra	Continuation of MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**545**	Abstract Algebra	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**570**	Real Analysis	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**571**	Real Analysis	Continuation of MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**572**	Complex Analysis	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**573**	Complex Analysis	Continuation of MAT 572.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**574**	Theory of Ordinary Differential Equations	Systems, existence proofs, singularities, asymptotic behavior of solutions, boundedness of solutions, eigenvalues and eigenfunctions, and perturbation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**578**	Functional Analysis	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**579**	Functional Analysis	Continuation of MAT 578.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-5		
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed either MAT 210, MAT 251, MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 170 with a grade of C or greater or be currently enrolled OR have completed the Calculus Placement Exam with a score of 36 or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 271 with a grade of C or greater or be currently enrolled.
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT272 with a grade of C or greater or be currently enrolled.
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better

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MAT	**350**	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 275 (or MAT 274) with D or better; MAT 343 (or MAt 342) with D or better; Co-requisite: STP 420
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed MAT300 and MAT342 with a grade of C or greater or be currently enrolled.
MAT	**450**	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed either MAT 210, MAT 251, MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MBB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**245**	Principles of Molecular and Cellular Biology I	Introduces molecular biology, genetic engineering, gene expression/control and evolution, in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	Pre-requisites: CHM 113 with C or better; Pre/Co-requisite: CHM 116 (with C or better if completed)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MBB	**247**	Principles of Molecular and Cellular Biology II	Introduces cell biology, metabolism and regulation, bioenergetics, and protein translocation in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 245 (or BIO 188) with a C or better
MBB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: MBB 247 or BIO 340 with a C or better; Students who have credit for BIO 343, may not enroll in MBB 343
MBB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB or PLB 350
MBB	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit is allowed for only BIO or MBB 440
MBB	**444**	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre or Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MIC 445 may not enroll in MBB 445
MBB	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MBB	**490**	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 247 with C or better; BIO 340 with C or better
MBB	**491**	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 343 with C or better; BIO 340 with C or better
MBB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
MBB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MBB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MBB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**501**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**555**	Advanced Molecular and Cellular Biology I	Study of structural and functional organization of biomolecules and cells, based on current literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
MCB	**556**	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MCB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**701**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
MCB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MCE	**548**	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
MCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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MCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCE	**230**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
MCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**447**	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
MCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
MCE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
MCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
MCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCO	**498**	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	N	OPT	College of Public Programs	Arizona State University	1-7		
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**200**	Introduction to Electronic Media	Surveys electronic media in the United States: history, regulation, organization, programming, and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**302**	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Communication student with a cumulative GPA of at least 2.0
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB & H	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**421**	Media Problems	Trends and problems of the mass media, emphasizing editorial decisions in the processing of information.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Minimum 2.25 GPA; Journalism & Mass Comm student OR Graduate Mass Communications student
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	G	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**435**	Emerging Media Technologies	Surveys new mass communication technologies and media distribution platforms in a convergent mass media environment.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**440**	Applied Media Research	Design, conduct, and analysis of applied media research. Students participate in the Cactus State Poll.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
MCO	**450**	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	HU	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**455**	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity¿s most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**460**	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	C	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**465**	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**470**	Issues Management and Media Strategy	Strategic aspects of media planning and management in public relations, public affairs, crisis communication lobbying, media ethics, and government relations.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR Graduate Mass Communication student
MCO	**473**	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Pre-requisites: Must be an Honors student
MCO	**493**	Honors Thesis		N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Pre-requisites: Must be an Honors student
MCO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
MCO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**501**	Newswriting and Reporting	Designed for graduate students in the MMC program who have undergraduate degrees in nonjournalism areas. Objective is to teach fundamentals of writing and reporting. Fee.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**503**	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**510**	Media Research Methods	Professional approach to online and library research, getting and using public records, and investigative journalism techniques.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**520**	Mass Communication Theories and Process	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to various professional communication needs.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**522**	Mass Media and Society	Mass media as social institutions, particularly interaction with government and public. Emphasizes criticism and normative statements.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**525**	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**530**	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**531**	Advanced Broadcast Reporting	News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**540**	Historical/Legal Methods	Introduces legal and historical methods necessary to conduct qualitative mass communication research.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**560**	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
MCO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
MET	**150**	Introduction to Engineering Technology	Introduces mechanical, manufacturing, and aeronautical engineering technology. Covers aspects of the industries utilizing these majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**160**	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**211**	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	**230**	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**231**	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 160 and MET 230
MET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**300**	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 230 and MET 231 OR MSE 250 OR Manufacturing Technology & Management concentration BAS student
MET	**302**	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: College of Technology and Innovation or Fulton Engineering students
MET	**309**	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**313**	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	**314**	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 313 or MAE 213 or MSE 211 or CON 223 or CEE 213 OR be co-enrolled in MET 313

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MET	**321**	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites:AET 312; MET 313; MET 340
MET	**331**	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or CON 223 or MAE 213)
MET	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: PHY 112 or PHY 131; MAT 266 or MAT 271
MET	**341**	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**344**	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; MET 300 (or MSE 250) or College of Technology and Innovation BAS student in Manufacturing Technology & Management concentration and MET 300
MET	**345**	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**351**	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: EST 210
MET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**396**	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or Senior standing
MET	**400**	Materials and Joining Processes	Effects of joining processes on metals and composites. Thermal cycle effects on solid-state and liquid-solid material transformations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**401**	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: APM 301; students who have credit for MET 501, may not enroll in MET 401
MET	**402**	Advanced Material Joining	In-depth analysis of common materials-joining processes and their process parameters. Includes automation, soldering, and adhesive bonding. Lecture, lab.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**409**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	**410**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 410 or 510.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341 . Students with credit for MET 510, may not enroll in MET 410
MET	**415**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341; students who have credit for MET 515, may not enroll in MET 415
MET	**416**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516
MET	**418**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 418 or 518.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300 or MSE 250. Students who have credit for MET 518, may not enroll in MET 418
MET	**421**	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 313, MET 340
MET	**423**	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 331
MET	**424**	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210; MET 321; MET 421
MET	**426**	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	**427**	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requistes: MET 423; MET 424
MET	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 or MAE 240; Credit is allowed for only EGR or MET 432
MET	**433**	Thermal Power Systems	Analyzes gas power, vapor power, and refrigeration cycles. Components of air conditioning systems. Direct energy conversion. Psychrometry. Analyzes internal combustion engines and fluid machines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: MET 432 OR College of Technology and Innovation MS student

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MET	**434**	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432
MET	**435**	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340
MET	**436**	Turbomachinery Design	Applies thermodynamics and fluid mechanics to the analysis of machinery design and power cycle performance predictions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 OR Technology and Innovation or Fulton Engineering graduate student
MET	**437**	Design for Materials Joining	Uses design principles to analyze structures and determine appropriate weld/braze/solder or adhesive joint size. Uses welding codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300
MET	**438**	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 OR Technology and Innovation or Fulton Engineering graduate student
MET	**440**	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331
MET	**442**	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; Credit is allowed for only MET 442 or 502
MET	**443**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	**444**	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 309; Credit is allowed for only MET 444 or 504
MET	**452**	Implementation of Robots in Manufacturing	Robotic workcell design, including end effectors, parts presenters, and optimum material flow.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351 OR Technology and Innovation or Fulton Engineering graduate student
MET	**455**	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351
MET	**460**	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 and senior status
MET	**461**	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 460
MET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
MET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
MET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Minimum Junior status; College of Technology and Innovation or Fulton Engineering student
MET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Minimum Junior standing; Manufacturing Engineering Tech student OR Technology and Innovation or Fulton Engineering graduate student
MET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**501**	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	**502**	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	**504**	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	**507**	Manufacturing Enterprise	Organization and project management of cellular manufacturing methods, including IIT and lean manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level or greater
MET	**509**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 409 or 509

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MET	**510**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 510 or 410.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for MET 410, may not enroll in MET 510
MET	**512**	Introduction to Robotics	Introduces industrial robots. Topics include: robot workspace, trajectory generation, robot actuators and sensors, design of end effectors, and economic justification. Application case studies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level OR Graduate or Non-degree students
MET	**513**	Advanced Automation	Analysis and design of hard and flexible automation systems. Particular attention to material-handling technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Minimum Senior Standing; College of Technology and Innovation or Fulton Engineering
MET	**514**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	**515**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	**516**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	**518**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 518 or 418.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students who have credit for MET 418, may not enroll in MET 518
MET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
MGT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-3		
MGT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**300**	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, or Business Minor student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better.
MGT	**301**	Principles of Management	Introduces the theoretical and practical foundations of organizations with a focus on individuals, groups, and organizational systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student.
MGT	**302**	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA, and 56 earned hours; Must have completed ECN 212 or 214 with a grade of C or greater.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**303**	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey School of Business Honors student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 with C or better
MGT	**310**	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	**320**	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: W.P. Carey Management BS student with min 56 earned hours; Pre- or co-requisite MGT 300.
MGT	**350**	Seminar in International Business	Broad exposure to global business; cross-cultural differences across business disciplines; European Union history and future; impact of exchange rates.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; SCM 300 with C or better, OR Non-business student with min 2.0 ASU cum GPA and 56 earned hrs and MGT 380 with C or better
MGT	**380**	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non degree or Grad student.
MGT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre- or Co-requisite: ACC 240 or ACC 241 with C grade or better.
MGT	**400**	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	**410**	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; Pre-requisites MGT 300, and MGT 320 or MGT 303, and ENG 302 with grade of C or better.
MGT	**411**	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.		Pre-requisites: Must be a Global Business/Ldrshp Mngt or Global Business/Human Resource student with conditional or professional status AND completed MGT 301 with a grade of C or greater or be currently enrolled.
MGT	**412**	Managing Human Resources	Overview of domestic and global human resources management topics pertinent to managers and first-line supervisors, as well as those with interest in human resources management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Global Business/Ldrshp Mngt or Global Business/Human Resource student with conditional or professional status, must not have earned credit for HRM 410, AND completed MGT 301 with a grade of C or greater.
MGT	**420**	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	**440**	Entrepreneurship	Provides students with a framework and a skill set for identifying, evaluating, valuing, and developing entrepreneurial opportunities. Challenges students to develop and refine their individual entrepreneurial perspective. Case-based and interactive instruction.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student, MGT 300 or MGT310 or MGT 303 completed with a grade of C or greater.
MGT	**445**	Business Plan Development	Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student, OR non-business students with a minimum 2.5 ASU cumulative GPA and at least 56 earned hours; MGT 440 completed with a grade of C or greater.
MGT	**450**	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey BS or BA student. Pre-requisites ENG 302 or 301, FIN 300 or FIN 302 or FIN 303, MKT 300 or MKT 302 or MKT 303, and MGT 300 or MGT 303 with C or better.
MGT	**459**	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-reqs: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with a grade of C or better;
MGT	**460**	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey Management BS student; Pre-requisite MGT 410, and FIN 300 or FIN 302 or FIN 303, and MKT 300 or MKT 302 or MKT 303 with C or better.
MGT	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process.
MGT	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process
MGT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey Management BS student.
MGT	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: Must be an Honors student
MGT	**493**	Honors Thesis		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
MGT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**502**	Organization Theory and Behavior	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: Specific W.P. Carey students
MGT	**503**	Human Resources Management: Principles and Skills	Emphasizes strategies for managing human resources and implementing HRM programs and policies that make people more productive and satisfied.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**504**	Ethics and Corporate Social Responsibility	Reviews practical and conceptual tools to deal with the ethical implications of a variety of types of managerial decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**505**	Leadership and the Knowledge Economy	Examines organizational processes that seek synergies between the information processing capacity of IT and the creative capacity of humans.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**512**	Professional Relationship Management	Explores theories, methods, skills, and practices central to development of professional-level expertise in the management of relationships in the workplace.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan.
MGT	**513**	Leadership Skills and Principles	In-depth study of traditional and emerging ways to demonstrate leadership effectively with emphasis on leadership development and coaching activities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan
MGT	**514**	Entrepreneurial Leaders	Applies leadership concepts to entrepreneurial processes. Considers independent entrepreneurs, as well as intrapreneurs within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Applied Leadership & Management graduate plan; MGT 513 with C or better
MGT	**515**	The Neuroscience of Leadership	Provides a rigorous understanding of how the human brain supports leaders in thought, perception, decision-making, affect, action, and social processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Mgt & Leadership graduate student in Acct & Applied Leadership or Applied Leadership & Mgt. Applied Leadership & Mgt students must have completed MGT 502, 503, 504, and 505 with C or better
MGT	**522**	Human Resource Activity and the Management of Diversity	Applies general and human resource management principles to work effectively with a diverse spectrum of people.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**523**	Performance Management	Addresses effective management of people in organizations. Considers evaluating and improving performance using concepts and application.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**559**	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-3		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**561**	Advanced Integrated Project	Capstone project of the high-technology ASU MBA. Student teams develop business plans for new technology-based products.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: MBA degree student
MGT	**570**	Management Consulting	Develops understanding of how internal and external consultants add value.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		
MGT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	0-12		
MGT	**588**	Strategic Leadership	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**589**	Strategic Management	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate W.P. Carey students or Public Administration MPA student
MGT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: MBA degree student
MGT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		
MGT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**596**	Global Strategic Management Project	Experientially examines the interaction among the strategic forces within an organization with the competitive forces in the global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in Applied Leadership & Management; MGT 502, 503, 504, and 505 with C or better
MGT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management	1-12		
MGT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-15		
MGT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management	1-15		
MHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	THE	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**538**	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Admission to the Masters of Healthcare Innovation
MHI	**540**	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Admission to the Masters of Healthcare Innovation
MHI	**542**	Systems Thinking in a Complex Environment	Studies basic and advanced systems principles as they relate to the American healthcare system. Specific emphasis is given to system assessment, designing system interventions, and managing system dysfunction from the innovator's perspective.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHI	**544**	Innovations in Information Systems	Allows students to develop their own learning goals around the innovative use of technology to: critically appraise and evaluate the use of technology to access information; develop skills in maximizing the use of technology to advance practice, thinking, and decision making; advance the integration of human potential and available technology; and develop strategies to address the competing priorities of technology, confidentiality, safety, high reliability principles, full disclosure to the public, and risk management. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**546**	Communication for Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**548**	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**550**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**552**	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**554**	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**561**	Capstone Innovation Project I	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**562**	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**563**	Capstone Innovation Project III	Finalizes the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
MHI	**679**	Biostatistics: Principles of Statistical Inference.	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHL	**140**	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must be a freshman
MHL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**201**	Mac Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	CS	
MHL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**341**	Music History	Western music from the Greeks to the present day. Need not be taken in sequence with MHL 342.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 140 with a C or better or currently enrolled; MTC 221 with a C or better or currently enrolled
MHL	**342**	Music History	See MHL 341.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or better
MHL	**344**	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	

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MHL	**352**	The Evolution of Jazz	Origin, development, and styles of jazz music and its exponents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MTC 223 with C or better
MHL	**363**	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	Pre-requisites: Music student; MHL 342 with C or better
MHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**438**	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	**439**	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	L & H	Pre-requisites:Must be a Music student; must have completed MHL341AND MHL342 AND MTC223 with a C or greater or be currently enrolled
MHL	**440**	Music Since 1900	Examines stylistic trends, major composers and their works, and cultural contexts in music since 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L or HU	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with a C or greater
MHL	**456**	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**466**	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	(L or HU) & C	
MHL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**492**	Honors Directed Study		N	THE	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MHL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MHL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**532**	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate Music student
MHL	**535**	Medieval Music	Music of Europe in the Middle Ages, Gregorian chant, religious and secular monophony and polyphony to 1400.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**536**	Music of the Renaissance	Music in Europe, with emphasis on stylistic concepts and changes, ca. 1400-1580.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**647**	Topics in American Music	Selected topics in the history of music. Composers working in the Americas with emphasis upon music since 1900.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**657**	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**664**	History of Music Instruments	Surveys the history and development of music instruments in traditional, folk, and art cultures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**668**	Introduction to Ethnomusicology	Introduces the theory and methodology of the discipline, including bibliography, fieldwork, transcription, analysis, and organology.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**670**	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**675**	History of Choral Music	Major choral works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MHL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		

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MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SG	
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SG	
MIC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SG	Pre-requisites: MIC 205 or MIC 220 with a D or better, or co-enrolled in MIC 205 or MIC 220
MIC	**220**	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requsites: CHM 116 and BIO 188 (or MBB 245)
MIC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**302**	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**314**	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**360**	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**379**	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**381**	Pathogenic Microbes	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 220 and MIC 360 with a C or better
MIC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**401**	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisite: MIC 302 with C or better
MIC	**402**	Service Learning	K-12 tutoring internship; learning activities employed were originally developed as part of the Bio Reach Program. Requires weekly reflective writing. Fee.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4		Pre-requistes: Mic 220, with a grade of C or better
MIC	**421**	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: MIC 302 with a grade of C or better
MIC	**425**	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 420 with C or better
MIC	**426**	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or MBB 245) and BIO 188 (or MBB 247) and BIO 353 with a C or better
MIC	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for PSY 427, may not enroll in MIC 427
MIC	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 420 or PHI 317 with a C or better. Students who have credit for PHI 428, may not enroll in MIC 428
MIC	**441**	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 340 with C or better; MIC 220 with C or better
MIC	**442**	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre/Co-requisite: MIC 441

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MIC	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MBB 445 may not enroll in MIC 445
MIC	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**470**	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MIC 302 with C or better
MIC	**475**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**485**	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**495**	Undergraduate Research	Supervised research in microbiology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**527**	Neuroimmunology	Studies the mind's influence on immunity and the immune system's influence on the mind, neuroimmunologic diseases, and the neuroimmunological circuitry involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**585**	Molecular Virology	Selected topics concerning molecular aspects of eukaryotic virus replication and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3-4		
MIC	**443**	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance. Not open to students with credit in MIC 205.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: BIO 353 or LSC 353 with C or better; LSC 445 or MIC 444 with C or better or co-enrolled in MIC 444
MIC	**444**	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SG	Pre-requisites: MIC 205 or MIC 220 with a D or better, or co-enrolled in MIC 205 or MIC 220
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MIS	**101**	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**102**	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	**201**	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**202**	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**205**	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**301**	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIS	**302**	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**303**	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**401**	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**402**	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**410**	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**412**	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Pre-requisites: Must be an Honors student
MIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0.		
MKT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	**300**	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ECN 211 or ECN 212 with a grade of C or better.
MKT	**301**	Fundamentals of Marketing	Examines the role and process of marketing within the society, economy, and business organization.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisite(s): School of Global Management and Leadership student with Professional OR Conditional status
MKT	**302**	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W.P. Carey Marketing BS student; ACC 241 and ECN 221 with C or better
MKT	**303**	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey School of Business Honors student; ACC 241, 242 or 271 with C or better; ECN 221 or ECN 231 with C or better; Credit is allowed for only MKT 300, 302 or 303
MKT	**352**	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	**360**	Seminar in International Business	Broad exposure to global business and cross-cultural differences. Emphasizes the European Union history and future and the impact of financial issues on marketing practices. Lecture, discussion, group work.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W. P. Carey BS or BA student OR Non-business student with min 2.5 ASU cum GPA and min 56 earned hours; SCM 300 with C or better
MKT	**365**	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with a minimum 2.5 ASU cum GPA, 2.5 and 56 earned hours; MKT 300 or MKT 302 or MKT 303 with C or better
MKT	**370**	Professional Sales Skills	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**390**	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**391**	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**393**	Essentials of Applied International Marketing	Travel to companies outside the United States to benchmark and assess cross-cultural marketing practices. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree seeking student OR be a Graduate student
MKT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisite: Non marketing student; Minimum cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**395**	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	**402**	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3-4		Pre-requisite: W.P. Carey BS or BA student or non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 352 with C or better
MKT	**410**	Sales and Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with minimum 2.5 ASU cumulative GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**413**	Marketing Research Concepts and Practice	Research techniques for collecting, analyzing, and interpreting marketing information. Includes design and completion of a client-sponsored, industry-based research project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		
MKT	**414**	Global Strategic Marketing	Examines marketing and marketing communication strategy development, and evaluation in the context of global markets and organizational objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		Pre-requisite: Global Mgt Marketing or Int'l Studies student with conditional or professional status; MKT 300, MKT 301 or GLB 301 with C or better
MKT	**415**	Promotion Management	Market positioning and integration of promotional activities and marketing communications of the firm, including advertising, personal selling, public relations, and sales promotion.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cumulative GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**420**	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**425**	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with a minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**430**	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA; MKT 302 or MKT 303 with grade of C or better
MKT	**435**	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**442**	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**452**	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**462**	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402.
MKT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey Marketing BS student; MKT 302 or MKT 303 with B or better
MKT	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Pre-requisites: Must be an Honors student
MKT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 302 or MKT 303 with C or better
MKT	**497**	Honors Colloquium		Y	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours

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MKT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	**502**	Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
MKT	**510**	Understanding Buyer Behavior	Examines behavioral science concepts and theories from the perspective of a marketing researcher who needs knowledge of customer behavior to aid marketing managers as they develop, evaluate, and implement effective marketing strategies for new and existing products.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**513**	Marketing Research for Product Development I	Covers qualitative and interpretive methodologies designed to understand and capture the voice of customers with the aim of infusing research results into the new product development process. Covers methods such as ethnographic and observational research, visual documentation, focus groups, in-depth interviews, and artifact analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**514**	Marketing Research for Product Development II	Provides theoretical and practical knowledge regarding the market assessment and survey research methods that underlie product development in organizations. Focuses on research techniques particularly applicable to the opportunity identification and concept/project evaluation stages of the new product development process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better or currently enrolled
MKT	**515**	Marketing Research for Product Development III	Emphasizes theory and tools useful for refining product development decisions involving narrow product development issues. Covers research techniques that are well suited for fine-tuning new product/service decisions associated with imminent market launch. Covers experimental designs, customer choice modeling, and lab and field test marketing along with appropriate data collection, measurement, and data analysis techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled
MKT	**524**	Services Marketing	Strategies for marketing services emphasizing the distinctive challenges and approaches that make marketing of services different from marketing manufactured goods.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate students; Must have completed HSA 502 or MKT 502 with a grade of C or greater or be currently enrolled
MKT	**530**	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student¿s individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization¿s structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**550**	Innovative Brand Management and Marketing Communication	Focuses on innovative approaches to brand development and management throughout the product life cycle. Emphasizes marketing communications in a fundamental aspect of this process. The demand for innovative practices is especially evident in many aspects, including new media, social media, technology, open sourcing, and customer co-creation of brands. Addresses the role of customer understanding to market success. Brand management and marketing communication are dominant innovation decision areas within marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**560**	Customer Relationship Management	Covers approaches for customer relationship management (CRM) including assessing customer value, prospect/customer identification and targeting, assessment and development of customer life-time value, and customer attrition and retention. Covers CRM issues, techniques, and terminology associated with database marketing and data mining for analytical opportunity identification. Students must complete a project using CRM software in order to demonstrate their command of CRM issues, both conceptually and practically.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**563**	Marketing Strategy	Planning and control concepts and methods for developing and evaluating strategic policy from a marketing perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate student; MKT 502 with C or better
MKT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		
MLS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
MLS	**501**	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**502**	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**503**	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MSE	**100**	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	2.		Pre-requisites: Undergraduate Engineering or University College student
MSE	**111**	Challenges in Materials Engineering	Introduces current issues and concepts of materials engineering, relationship between materials properties, application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	
MSE	**211**	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	**215**	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	**250**	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: CHM 114 or CHM 113; Pre/Co-requisite: CHM 116
MSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**308**	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	Pre-requisite: MSE 208
MSE	**315**	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	CS	Pre-requisites: Engineering BS/BSE students OR Non-Engineering students with a minimum GPA of 3.00; MAT 275 (or MAT 274) with C or better; MSE 250 with C or better

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MSE	**330**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.00; MSE 250 or ECE 350 completed with D or better or currently enrolled in MSE 250
MSE	**335**	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 330 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**355**	Materials Structure and Microstructure	Elements of the structure of metals and alloys, measurement of mechanical properties, and optical metallography. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better,OR Graduate Engineering student
MSE	**356**	Materials Structure and Microstructure Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 355
MSE	**358**	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 315 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**420**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with D or better OR Graduate Engineering student. Credit for MSE 420 or MSE 514 only.
MSE	**421**	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 420
MSE	**431**	Materials Electrochemistry and Corrosion	Introduces terms, the structure of electrified interface and review of thermodynamics of chemical reactions, Faraday¿s Law, electrochemical thermodynamics; metal/ion potentials, redox potentials, hydrogen and oxygen electrode, Pourbaix diagrams, electrical double layer, electrocapillarity, Lippmann equation, electrochemical kinetics, theory of overvoltage, kinetics of corrosion, mixed potential theory, polarization curves, passivation of metals, pitting, fuel cells, electrodeposition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 330 completed with D or better
MSE	**440**	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 440 or 516.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with a D or better or currently enrolled in MSE 355
MSE	**441**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 441 or 512.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better or ECE 350 with D or better
MSE	**450**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; PHY 131; MSE 355; Students who have credit for MSE 510, may not enroll in MSE 450
MSE	**451**	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. Fee.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre-requisites: Engineering BS/BSE student; Co-requisite: MSE 450
MSE	**470**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or Materials minor ; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better. Students who have credit for MAE 455, may not enroll in MSE 470
MSE	**471**	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 with D or better
MSE	**475**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; May not enroll in MSE 475 if received credit for MSE 518
MSE	**476**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 476 or 519.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better. May not enroll in MSE 476, if received credit for MSE 519
MSE	**482**	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisites: Engineering BS/BSE student; MSE 420 with a D or better or currently enrolled; Pre- or Co-requisites: MSE 470 and MSE 471 (with D or better if completed) OR Graduate Engineering students
MSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**490**	Capstone Design Project	For small groups in fundamental or applied aspects of engineering materials; emphasizes experimental problems and design. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisite: Engineering BS/BSE student; MSE 482
MSE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6		Pre-requisites: Honors students only

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MSE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6	L	Pre-requisites: Honors students only
MSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Engineering BS/BSE student
MSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-7		Pre-requisite: Engineering BS/BSE or Engineering Graduate student
MSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**510**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	**511**	Corrosion and Corrosion Control	Introduces corrosion mechanisms and methods of preventing corrosion. Topics include: electrochemistry, polarization, corrosion rates, oxidation, coatings, and cathodic protection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**512**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 512 or 441.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**513**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**514**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	**515**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**516**	Mechanical Properties of Solids	Effects of environmental and microstructional variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 516 or 440.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**517**	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requsiites: Fulton Engineering Graduate students. If you have credit in CHE 518, EEE 518, or MSE 475 you may not enroll in MSE 518
MSE	**519**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 519 or 476.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**520**	Theory of Crystalline Solids	Anisotropic properties of crystals; tensor treatment of elastic, magnetic, electric and thermal properties, and crystallography of Martensitic transformations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**521**	Defects in Crystalline Solids	Introduces the geometry, interaction, and equilibrium between dislocations and point defects. Discusses relations between defects and properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**523**	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**524**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only CHM 541 or MSE 524

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MSE	**525**	Physics of Materials	Teaches fundamental concepts of applied physics as related to the solid state. Wave-particle duality and the Schrodinger equation; chemical cohesion, bonds and energy bands in metals and insulators; optical, electronic, and magnetic properties. Requires a basic knowledge of differential equations; linear algebra; and electrical, magnetic, and optical properties of materials. A course in modern physics is highly recommended, but not required.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**526**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 511 or 481.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**527**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Students who have credit for PHY 482, PHY 512, or NAN 512, may not enroll in MSE 527
MSE	**540**	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only NAN, MSE or PHY 546
MSE	**550**	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only MSE, NAN, PHY or SEM 552
MSE	**553**	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-3		Prerequisite(s): degree- or nondegree-seeking graduate. Corequisite(s): MSE 552 (or PHY 552). Credit is allowed for only MSE 553 or PHY 553
MSE	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**555**	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**561**	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**562**	Ion Implantation	Includes defect production and annealing. Generalized treatment, including ion implantation, neutron irradiation damage, and the interaction of other incident beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**565**	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**570**	Polymer Structure and Properties	Relationships between structure and properties of synthetic polymers, including glass transition, molecular relaxations, crystalline state viscoelasticity, morphological characterization, and processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**571**	Ceramics	Includes ceramic processing, casting, molding, firing, sintering, crystal defects, and mechanical, electronic, and physical properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**573**	Magnetic Materials	Emphasizes ferromagnetic and ferrimagnetic phenomena. Domains, magnetic anisotrophy, and magnetastriction. Study of commercial magnetic materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	**601**	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**602**	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students

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MSI	**755**	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Doctoral Music students
MTC	**123**	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Must be a music student in the music composition (FAMUSTCBM) plan
MTC	**125**	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sightsinging and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**221**	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 125 with C or better
MTC	**222**	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 221 with C or better
MTC	**223**	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**315**	Modern Arranging	Techniques in arranging for the contemporary jazz, radio, television, and studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; MTC 223 with C or better
MTC	**316**	Modern Arranging	Continuation of MTC 315.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	**320**	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**321**	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**323**	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Bachelor of Music student
MTC	**327**	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**422**	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; Passed audition
MTC	**425**	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC223 with a C or greater or be currently enrolled
MTC	**428**	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC223 with a C or greater or be currently enrolled
MTC	**429**	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 321 with C or better
MTC	**430**	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**433**	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**436**	Electronic Studio Techniques I	Principles of analog electronic music systems and their application in the composition of electronic music. Assumes a thorough knowledge of music notation and intervals.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**437**	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**440**	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**441**	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requsites:Must be a Music student; must have completed MTC 321 AND MUP 236 with a C or greater or be currently enrolled
MTC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**495**	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0.		
MTC	**496**	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MTC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**516**	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**517**	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**518**	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**519**	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**520**	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**523**	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	**525**	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**527**	History of Music Theory	Theory from Pythagoras to the 16th century. Need not be taken in sequence with MTC 528.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**528**	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MTC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**723**	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MTC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 180 with C or better
MTE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**380**	Arithmetic in the Elementary School	Historical numeration systems, overview of elementary number theory, including primes, factorization, divisibility, bases, modular systems, linear congruence, and continued fractions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE181 with C or better
MTE	**381**	Geometry in the Elementary School	Informal geometry, including concepts of length, area, volume, similarity, and congruence. Classification of figures, straightedge and compass constructions, and motion geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 380 with C or better
MTE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	C	Pre or Co-requisites: MTE 180 with C or better
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**483**	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MTE	**585**	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**587**	Analysis for Teachers	Subject matter in mathematics appropriate for accelerated programs in secondary schools, including analytic geometry and calculus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		

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MTE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MTE 180 with C or better
MTE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**588**	Analysis for Teachers		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
MU	**502**	Hist Musical Style		N	LEC	N	CNV	Herberger College of the Arts	School of Music	2.		
MUD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
MUD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUE	**110**	Introduction to Music Education	Overview of music education. Orientation to student characteristics, teacher roles, and foundations of philosophy and history. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student
MUE	**161**	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		

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MUE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**211**	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**261**	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional`ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MUE161 with C or better
MUE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**310**	Music in Early Childhood Education	Identifying and understanding musical needs of young children. Methods and materials for program development for classroom teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**311**	Music for Classroom Teacher	Development of the classroom music program in the elementary school. No previous music experience or course work required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**313**	Elementary Music Methods	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisite: Music student
MUE	**315**	General Music in Secondary Schools	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student
MUE	**317**	Educational Methods for Violin and Viola	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**318**	Educational Methods for Cello and String Bass	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**327**	Educational Methods for Trumpet and Horn	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**328**	Educational Methods for Trombone, Euphonium, and Tuba	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**335**	Educational Methods for Guitar	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**336**	Educational Methods for Percussion	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Education student
MUE	**337**	Educational Methods for Flute, Clarinet, and Saxophone	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**338**	Educational Methods for Double Reed Instruments	Teaching and playing skills for music teachers. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**381**	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L	Pre-requisite: Music Therapy student
MUE	**384**	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**385**	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**386**	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**387**	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**388**	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**389**	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Prerequisite:Must be a Music Therapy student; must have completed MUE211 with a C or greater or be currently enrolled
MUE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Music Therapy student
MUE	**436**	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy student
MUE	**441**	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**463**	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	**467**	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**475**	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Prerequisites:Must be a Music Therapy student; must have completed MUE362 with a C or greater or be currently enrolled
MUE	**476**	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	**480**	Choral Methods	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**481**	Instrumental Practicum/Methods	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**482**	Instrumental Practicum/Methods	See MUE 481.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**485**	String Practicum/Methods	For students preparing to administer a string program and teach strings at the elementary level.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**501**	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups. Prerequisite: graduate student in Music Therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Must be a graduate student in Music Therapy
MUE	**548**	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**549**	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**550**	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**551**	Advanced Studies in Elementary School Music	For experienced teachers; organization and content of K-6 general music classes. Emphasizes teaching music reading and ear training to young children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**552**	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**560**	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**562**	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**564**	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**566**	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**567**	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Must be a graduate Music Therapy student
MUE	**568**	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**569**	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	**570**	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**571**	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**572**	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**573**	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy MM student
MUE	**574**	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**575**	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**579**	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**585**	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**586**	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisites:Completed MUE 571, 572, 574, and 575, or currently enrolled.
MUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**754**	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**755**	Historical Research in Music Education	Knowledge and insights related to conducting historical research in music education. Includes development of a mini-proposal for a dissertation on the history of music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**756**	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**757**	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**100**	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0.		
MUP	**111**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**117**	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**121**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**127**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisites: Music students who have passed audition
MUP	**131**	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**132**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Prerequisites: Must be a Music Therapy student; must have completed MUP131 with a C or greater or be currently enrolled
MUP	**133**	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**134**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**141**	Jazz Fundamentals	Principles, methods, and theory of jazz performance and pedagogy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**209**	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**210**	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**217**	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 117 with C or better
MUP	**231**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP132 with C or better
MUP	**232**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP231 with C or better
MUP	**233**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition

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MUP	**234**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**235**	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**236**	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**237**	Fretboard Harmony	Scales, chords, harmony, basic improvisation for the guitar. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**250**	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music students who have passed audition
MUP	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**301**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP 232 with C or better
MUP	**302**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP301 with C or better
MUP	**311**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**317**	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**319**	Recording Studio Techniques	Study of both analog and digital recording methods. Includes lab time on recording console and tape machines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**321**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**327**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Music students who have passed audition
MUP	**337**	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**339**	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**340**	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**344**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**345**	Symphony Orchestra	Over a 4-year period, the student is introduced to the masterpieces of symphony orchestra literature. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**346**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**350**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**352**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**353**	Symphonic Chorale	4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**355**	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**357**	Women's Chorus	2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**361**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets daily.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		

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MUP	**362**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 2 hours per week in fall, 4 hours in spring. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**363**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 2 hours per week. Performing ensemble. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**370**	Music Theatre: Techniques	Exercises and improvisations for the singer/actor emphasizing body awareness, basic music theater performance skills, and freedom of the vocal and breath mechanisms. Section 1 (Movement for Singers); Section 2 (Expression); Section 3 (Interpretation); Section 4 (Advanced Expression); Section 5 (Advanced Interpretation). Sections 2 through 5 must be taken in sequence. Each section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**371**	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**372**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**373**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**374**	Music Theatre: Production	Participation in Lyric Opera Theatre productions. Section 1 (Vocal Performance); Section 2 (Technical Music Theatre); Section 3 (Problems in Production) to be taken concurrently with MUP 373, Section 2.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**376**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**377**	Brass Choir	Specializing in public performance of music written for brass instruments. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**379**	Chamber Music Ensembles	Brass, guitar, keyboard, mixed, percussion, string, vocal, and woodwind ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**385**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**386**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**387**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**388**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**440**	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**451**	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**453**	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**454**	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**481**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**482**	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Music students who have passed audition
MUP	**487**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Music students who have passed audition
MUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**495**	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**496**	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		Pre-requisites: Music students who have passed audition

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MUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**507**	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**508**	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**509**	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**510**	Jazz Keyboard Harmony	Continuation of MUP 509.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**511**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		
MUP	**517**	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**518**	Advanced Improvisation	Continuation of MUP 517.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**521**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**527**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MUP	**540**	Advanced Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**541**	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**544**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**545**	Symphony Orchestra	Masterpieces of symphony orchestra literature. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**546**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**550**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**551**	Repertoire	Literature available for performance in all performing media. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**552**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit for a total of 8 hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**553**	Symphonic Chorale	4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**555**	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**557**	Women's Chorus	2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**561**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**562**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 4 hours per week. May be repeated for credit. Performing ensembl	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**563**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 4 hours per week. May be repeated for credit. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	**570**	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**571**	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**572**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**573**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**574**	Music Theatre: Production	Participation in Lyric Opera Theatre productions. Section 1 (Vocal Performance); Section 2 (Technical Music Theatre); Section 3 (Problems in Production) to be taken concurrently with MUP 573, Section 2.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**576**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**579**	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**581**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Credit is allowed for only MUP 481 or MUP 581
MUP	**585**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**586**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**587**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**588**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**596**	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**597**	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**671**	Choral Repertoire	Examines large choral/orchestral works to determine their musical and textual characteristics from a conductor's point of view.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**727**	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		
MUP	**751**	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**796**	Solo Performance	May be repeated for credit.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**100**	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**340**	Survey of Music History	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & H	

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MUS	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**355**	Survey of American Music	Growth and development of American music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**410**	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**340-W**	Listening to Music	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**349**	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**357**	Aesthetic Perception in Music Performance	2 hours per week. May be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		

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MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
NAN	**505**	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**506**	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311; PHY 315; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
NAN	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
NAN	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples across physics and astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
NAN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NLM	**160**	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 210, PRM 210 or TDM 210

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NLM	**220**	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**300**	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 301, TDM 301 or PRM 301
NLM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
NLM	**310**	Volunteer Management	Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**320**	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: For American Humanics students only
NLM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 410, PRM 401 or TDM 401 with C or better; Credit is allowed for only NLM 402, TDM 402 or PRM 402
NLM	**403**	Pre-Internship Workshop	Introduces and prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303, NLM 410, or TDM 372 with C or better; Students who have credit for PRM 403 or TDM 403, may not enroll in NLM 403
NLM	**410**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 410 or 562.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites:MAT 142 or higher;NLM or Recreation Management (nonprofit emphasis) major;2.50 ASU GPA;45 minimum hours;grade of C or better in ENG 102, NLM 210, & 220. Students who have credit for NLM 562, may not enroll in NLM 410
NLM	**420**	American Humanics Institute	National Management Institute for preparation of nonprofit professionals. Requires out-of-state conference.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-2		Pre-requisites: For American Humanics students only
NLM	**430**	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Senior standing; NLM 220 with C or better
NLM	**435**	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	DIS	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Earned grade of C or better in NLM 402, 430, PRM 401, 402 or TDM 401, 402 in; Earned grade of C or better in TDM403, NLM403 or PRM403 or have completed REC 350 or REC 440 with C or better. Academic level senior
NLM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
NLM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		

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NLM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**510**	Foundations of Nonprofit Management	Explores the history and role of the nonprofit sector in American society; contemporary issues and delivery systems. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**520**	Financial Management in Nonprofit Organizations	Reviews funding structures utilized by nonprofit organizations; financial tools used by managers; fund raising practices and tools. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**530**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**540**	Volunteer and Human Resources in Nonprofit Organizations	Managing the volunteer and paid staff human resources in nonprofit organizations; practices and theories. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**550**	Philanthropy: Theory and Practice	Provides overview of selected fundraising topics and insight into both the theory and practice of this area.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**560**	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**562**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 562 or 410.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Credit is allowed for only NLM 410 or 562
NLM	**565**	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
NLM	**584**	Internship		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
NLM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
NLM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
NLM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
NLM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
NLM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		

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NLM	**610**	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**620**	Critical Issues Facing Nonprofits	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Prerequisite: Master of Nonprofit Studies major
NTR	**100**	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**142**	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nutrition (Food/Nutrtn Mngt), Nutrition (Human Nutrition), Nutrition (Dietetics), or Nutrition (Nutrition Comm) student
NTR	**150**	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NTR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**241**	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: CHM 101 or CHM 113 with D or better
NTR	**300**	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: NTR 100 or 241
NTR	**320**	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NTR 100 or 241
NTR	**340**	Applications in Human Nutrition	Applies nutrient metabolism through case studies and product evaluations; special topics in human nutrition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BIO 201; NTR 241
NTR	**341**	Introduction to Planning Therapeutic Diets	Cultural, health, and economic aspects of planning therapeutic diets. Assessments of food and diet composition. Reviews common therapeutic diets. Credit is allowed for only NTR 341 or 345. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed FON 100 or FON 241 with D or better or NTR 100 or NTR 241 with D or better or currently enrolled
NTR	**343**	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 142 with D or better
NTR	**344**	Nutrition Services Management	Organization, administration, and management of food and nutrition services in hospitals and other institutions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: FON 100, FON 241, NTR 100 or NTR 241
NTR	**345**	Development of Healthy Cuisines	Principles and applications of nutrition and medical nutrition therapy; development of healthy cuisines in health and disease states. Credit is allowed for only NTR 345 or 341.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or less than in NTR 341 or completed FON 100 or FON 241 with D or better or NTR 100 or NTR 241 with D or better or currently enrolled
NTR	**346**	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in FON 241 or NTR 241 or be currently enrolled AND earned D or better or currently enrolled in BIO 202
NTR	**348**	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	**350**	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: NTR 341 with C or better or NTR 345
NTR	**351**	Nutrition and Health Communications	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NTR 100 or 241
NTR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**400**	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed NTR 440, NTR 441, or NTR 444 with D or better or be currrently enrolled AND earned D or better in NTR 341 or be currently enrolled.
NTR	**401**	Professional Practice in Food Service Management	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in NTR 343 or NTR 445 or be currently enrolled
NTR	**440**	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 202 with C or better; NTR 241 with C or better; NTR 340 with C or better; Credit is allowed for only NTR 440 or 540
NTR	**441**	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:You may not enroll in NTR 441, if you have credit for NTR 541; BIO 202 with D or better; BCH 361 with C or better; NTR 241 with D or better
NTR	**442**	Experimental Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Earned D or better in NTR 142 or FON 142 or currently enrolled in NTR 142 AND earned D or better in CHM 231 or CHM 331 or currently enrolled.
NTR	**444**	Medical Nutrition Therapy	Principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 341 or FON 341 with C or better OR enrolled in NTR 341; BIO 202; Credit is allowed for only NTR 444 or 544
NTR	**445**	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or NTR 241 with D or better; NTR 142 with D or better; Students who have credit for NTR 545, may not enroll in NTR 445

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NTR	**446**	Human Nutrition Assessment Lecture/Laboratory	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned C or better in BCH 361 and earned C or better in NTR 440 or NTR 441; Students who have credit for NTR 446, may not enroll in NTR 546
NTR	**448**	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	**450**	Nutrition in the Life Cycle I	Emphasizes nutritional needs and problems during pregnancy, lactation, infancy, and childhood.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	**451**	Nutrition in the Life Cycle II	Nutritional needs and problems of adults, particularly the elderly.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**492**	Honors Directed Study		N	THE	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NTR	**493**	Honors Thesis		N	THE	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NTR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NTR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**501**	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**521**	Nutrition and Immunology	Critical review of current research on nutrient metabolism, immune function.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**523**	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**525**	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**527**	Energy Balance and Weight Management	Reviews energy regulation, eating disorders, obesity, weight control methodologies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**529**	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**535**	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441
NTR	**537**	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**540**	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 440 or 540
NTR	**541**	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 441 or 541
NTR	**544**	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 444 or 544
NTR	**545**	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 445 or 545
NTR	**546**	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 446 or 546
NTR	**548**	Nutrition Program Development	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 448 or 548
NTR	**550**	Advanced Maternal and Child Nutrition	In-depth review of metabolic characteristics and nutritional needs of the pregnant woman, lactating woman, infant, and child.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NTR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NTR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NUR	**310**	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing undergraduate student; Co-requisites: NUR 311, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**311**	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student; Co-requisites: NUR 310, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**314**	Health Assessment for Registered Nurses	Introductory knowledge and skills for systematic physical, psychosocial, and developmental nursing assessment over the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**315**	Methods and Critical Appraisal for Evidence-Based Practice	Scientific and clinical inquiry, research methodology, and critical appraisal in the synthesis of research findings for application in evidence-based nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NUR 310, NUR 311, NUR 394: Psychomotor Skills for Prof Nursing Practice) and NUR 330 with C or better; NUR 320 (or NUR 484: Intro to Nursing Practice I) with Y
NUR	**320**	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Enrollment in upper division nursing program; Co-requisites: NUR 310, NUR 311 and NUR 394: Psychomotor Skills for Professional Nursing Practice
NUR	**323**	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Enrollment in upper division nursing program; NUR 310, 311, 394:Psychomotor Skills for Prof Nurs Pract with C or better; NUR 320 (or 484: Intro to Nurs Pract I) with grade of Y; Co-requisites: NUR 313 or 394:Nursing Concepts Adult Health
NUR	**330**	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**342**	Theory II: Health Integrity and Alterations	Concepts related to selected alterations in health integrity with focus on individuals, families, and groups. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate Nursing student, NUR 381 with C or better
NUR	**364**	Professional Development II: Nursing Research for RNs	Introduces concepts and issues in nursing research. Emphasizes quantitative and qualitative research processes, examination of nursing research literature.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student.
NUR	**391**	Registered Nurse Mobility I: Professional Development	Historical, philosophical, and theoretical bases for professional nursing practice. Enhancement of critical inquiry skills through exploration of selected issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisties: Must be in Nursing
NUR	**392**	Registered Nurse Mobility II: Health and Wellness	Concepts of health integrity and community-based practice and professional nursing roles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisties: Must be in Nursing

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NUR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**413**	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**423**	Nursing Practice: Complex Care and Leadership and Management	Applies advanced psychomotor skills, leadership and management principles, and interprofessional collaboration for clients experiencing health alterations across the lifespan in multiple health settings. Fee.	N	LAB	N	P/F	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**430**	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Undergraduate nursing student.
NUR	**431**	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**440**	Theory III: Health Integrity and Alterations for RNs	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student; must have completed NUR 392 with a grade of C or greater.
NUR	**441**	Theory III: Health Integrity and Alterations	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student.
NUR	**444**	Theory IV: Health Integrity and Alterations for RNs	Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 315, NUR 391, TWC 361 with C or better
NUR	**445**	Theory V: Leadership and Management for RNs	Selected theories and concepts of organizations, management, leadership with focus on selected client populations for experienced RNs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**460**	Professional Development III: the Art of Nursing for RNs	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Must be an undergraduate nursing student.
NUR	**461**	Professional Development III: the Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**464**	Professional Development IV for RNs	Capstone professional development course for the RN student.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**481**	Nursing Practice III	Lab, clinical experiences. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	7.		Pre-requisites: NUR 313 (394:Nurs Conc for Adult Health), 314 (394:Nurs Conc for Psych/Mental Health), 315, 323 (484:NP Adult Health), 324 (484:NP Psych/Mental Health); Co-requisites: NUR 411 or NUR 498: Nurs Conc for Childbearing & Pediatric Clients
NUR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NUR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**495**	Community Health/Home Health Practice for RNs	Theoretical content related to community and home healthcare. Clinical practice with individual, family aggregates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**496**	Leadership and Management Practice for RNs	Capstone leadership and management experience for the RN student that utilizes patterns of knowing in nursing practice. fee	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Upper Division Nursing Program students
NUR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NUR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate Nursing student; NUR 551 with B or better
NUR	**503**	Adult Acute: Advanced Theory I	Focuses on theoretical, research, and advanced assessment skills required for advanced practice across the acute care continuum.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a MS nursing, AHN or non-degree nursing student; AND must have completed NUR 503 and 564 with a grade of B or better or be currently enrolled.
NUR	**508**	Advanced Nursing Practicum I: Adult Acute Nursing	Required practicum for preparation for advanced practice across the acute care continuum. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisites: Must co-enroll in NUR 503
NUR	**513**	Advanced Practice Nursing Role III	Third of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate Nursing student; NUR 512 with B or better

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NUR	**521**	Psychiatric/Mental Health Nursing: Advanced Mental Health Assessment	Theories related to holistic health assessment for the promotion of physical/psychological health; develops skill in mental health assessments.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student
NUR	**526**	Advanced Neonatal Physical Assessment	Develops assessment skills related to neonate/infant, including history-taking, physical, developmental, behavioral, cultural, and genetics assessment to provide comprehensive advanced practice neonatal nursing care. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing MS student or Non-degree seeking Graduate student; Co-requisite: NUR 525
NUR	**527**	Neonatal and Pediatric Pharmacology in Nursing Practice	Examines and discusses the rationale, action, and therapeutic effect for using each class of medications employed in neonatal and pediatric healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**528**	Advanced Developmental and Family-Centered Nursing Care	Provides the foundation for providing advanced nursing care of children that is developmentally supportive, family centered, and culturally competent. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**538**	Understanding & Applying Prin of Evidence-Based Care in Advanced Practice	Understanding how application of evidence-based practice principles assist advanced practice nurses and other healthcare professionals to provide best care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**539**	Generating Internal Evidence and Validating Application of Evidence through Outcomes Management	Assists advanced practice clinicians to provide best care through generating and validating application of evidence using outcomes management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**540**	Teaching Evidence-Based Practice	Focuses on strategies that have been demonstrated as effective methods for teaching evidence-based practice in academic and clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
NUR	**541**	Application of Principles of Mentorship for Change toward Evidence-Based Practice	Assists advance practice nurses and other healthcare professionals to facilitate change toward evidence-based practice through mentorship.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**543**	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on disseminating evidence to advance best practice with an emphasis on advancing EBP in health policy and the media.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**558**	Advanced Pediatric Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, and adolescents. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554,, or co-enrolled.
NUR	**559**	Advanced Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, adolescents, and adults. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554, or be currently enrolled, or co-enrolled.
NUR	**578**	Gestalt Therapy I	Introduces theory and methodology of Gestalt therapy and its uses for mental health promotion and restoration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**579**	Gestalt Therapy II	Focuses on further development of Gestalt therapy and its application in working with various client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 578 with B or better
NUR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing student
NUR	**581**	Advanced Nursing Practicum I: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be in Nursing MS or Nursing (Comm Health Adv Prac) ; AND co-enrolled in CHP 501 and completed NUR 500 with a grade of B or greater,.
NUR	**582**	Advanced Human Physiology	Analyzes major theories and concepts of human physiology. Explores interrelationship of physiology and health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-3		Pre-requisites: MS Nursing, AHN or non-degree Nursing student; NUR 500, 552 and 554 with B or better
NUR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites:Must be in Nursing MS or Nursing (Comm Health Adv Prac); NUR 500, 551, 552 and CHP 502 with B or better; NUR 581 or 587 with B or better; Co-requisite: NUR 510
NUR	**587**	Advanced Nursing Practicum II: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing MS or Nursing (Comm Health Adv Prac); NUR 581 with B or better; Co-requisite: CHP 502
NUR	**589**	Research Utilization	Emphasizes the synthesis and application of research to an identified clinical nursing problem. Must be repeated for credit.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		
NUR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

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NUR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing Graduate student
NUR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**601**	Professional Role Development in Nursing and Healthcare Innovation	Explores professional identity in nursing education, health policy, and research and how one's identity can influence individual, family, and community engagement in healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student
NUR	**603**	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**604**	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and phlosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**605**	Theories Related to Nursing and Healthcare Innovation	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**608**	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**609**	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**610**	EBP: Critical Appraisal/Synthesis-Evidence	Knowledge and skills in critical appraisal and synthesis of evidence to guide best practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**611**	Collaborative Inquiry	Seminar and immersion experience designed to foster student participation in multidisciplinary research teams to address nursing and health problems.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**612**	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**613**	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**614**	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**670**	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: MS Nursing (Nursing Education) or Graduate Certificate in Nursing Education; Pre/Co-requisite: NUR671 with B or better
NUR	**671**	Teaching in Academic and Practice Settings	Analyzes theories, issues, and research related to teaching in nursing. Focuses on the process of teaching/learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	**672**	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**673**	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NUR	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**685**	Geriatric Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
NUR	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**692**	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
OMT	**343**	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**344**	Industrial Organization	Industrial organization concepts. Topics relate to industrial relations, governmental regulations, organizational structure, labor relations, human factors, and current industrial practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**345**	Public Sector Management	Management in government and public agencies. Includes mission, planning and organizing to provide services, human resource issues, conflict resolution, coordination.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**401**	Statistics for Industry	Two-part online statistics with applications for the practitioner in industry. Includes data description, measures of central tendency and variability, probability, tests of hypotheses, regression analysis and analysis of categorical data.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:MAT 117 with a grade of D or better, or currently enrolled
OMT	**402**	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**405**	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**430**	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:School of Technology or Coll of Engr & Appl Sci Non-Degree plan or School of Technology BAS, BS, or MS Tech plan
OMT	**440**	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Prerequisites:Must have received a D or greater in IST346 or MGT301 or OMT440 (or be currently enrolled in IST346 or MGT301 or OMT440) OR you must be in an Enginnering & Appl Sci or Sch of Tech Plan: NDegr,BAS,MS,MSTech
OMT	**445**	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-10		Prerequisites: Minimum 2.25 GPA AND Minimum Junior standing AND Technology & Innovation BAS or BS student
OMT	**451**	Industrial Distribution and Materials Management	Surveys topics in industrial distribution, including, but not limited to, materials handling, purchasing, receiving, warehousing, traffic, inventory control, and shipping.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MSTech OR must have received a C or greater in TMC346 OR received a D or greater in IST346 or MGT301 (or becirrently enrolled in TMC346 or IST346 or MGT301

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OMT	**452**	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MS Tech
OMT	**453**	Safety Management	Development and management of safety programs, education and training, and relationships within an organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Must have received a D or greater in ITC343 or ITM343 or OMT343
OMT	**455**	Industrial Marketing Concepts	Customer and sales strategies for industrial organizations, including current practice and future planning.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Academic Level must be equal to or greater than a Junior AND must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346, OR be in a Schl of Tech Grad Plan
OMT	**456**	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**461**	Operations Management	Introduces supervisory principles as applied to production of goods and services.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: IMC 346 or IST 346 or MGT 301 or (TMC 346 AND APM 301) or STP 420, OR Engr & Tech & Innov: Non Degree or BAS or MS or MS Tech
OMT	**480**	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA
OMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
OMT	**502**	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**503**	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**504**	Law and Ethics for Technical Professionals	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**520**	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**540**	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**548**	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**549**	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**550**	Industrial Training and Development	Training techniques and learning processes. Planning, developing, evaluating, and managing industrial and governmental programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**552**	Global Management Philosophies	Analyzes and compares significant supervision philosophies developed in various industrial nations and their potential application in the United States.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**560**	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**570**	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:You may not enroll in OMT 570, if you have credit for TMC 470

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OMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
OPM	**301**	Operations Management	Introduces the management of service and manufacturing conversion processes, with emphases on quality management and computer applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a Global Management student with conditional or professional status
OPM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	**502**	Management of Operations Technology	Design, control, and improvement of operations technology. Concepts and modeling tools required for strategic decisions in manufacturing and service operations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
OPM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**300**	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**340**	Public Management and Policy	Develops conceptual, critical, and practical understanding of policy, the policy process, and policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**401**	Statistics	Surveys statistical concepts and techniques with application to public administration. Does not count toward program of study. Satisfies statistics prerequisite requirement for PAF 501 and 502.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**410**	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**411**	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**420**	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**460**	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**492**	Honors Directed Study		Y	LEC	Y	CNV	College of Public Programs	School of Public Affairs	1-3		
PAF	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
PAF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		

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PAF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-3		
PAF	**501**	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	**502**	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**503**	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**504**	Public Affairs Economics	Basics of public sector economics, microeconomic and macroeconomic concepts applied to public sector decisions and policies.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**505**	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 with C or better
PAF	**506**	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 completed with C or better or currently enrolled
PAF	**507**	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**508**	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**509**	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	**520**	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**522**	Public Labor Relations	Rise of public unionism, managerial policy toward unionism, conflict resolution; impact of unionism on budgets, personnel policies, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**523**	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**525**	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**529**	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**530**	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**531**	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**534**	Urban Infrastructure	Covers various types of infrastructure operated by local governments and the issues related to management of those various public assets.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**536**	Urban Policy Making	Analyzes the opportunities and costs of influencing public policy and the roles of officials and bureaucracies in decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**540**	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 505 with C or better
PAF	**541**	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**546**	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**547**	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
PAF	**548**	Women/Politics/Publc Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		

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PAF	**549**	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**551**	Computers in Administration	Experience in use of computer technology for public administration problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**562**	Intergovernmental Relations	Evolution, growth, present status, and characteristics of the U.S. federal system of government. Federal-state relations, state-local relations, regionalism, councils of government, interstate cooperation, grants-in-aid, and revenue sharing.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**564**	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**570**	Urban Economics and Public Finance	Examines microeconomics at the intermediate level, along with topics in urban microeconomics focusing on issues of urban finance and taxation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**571**	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**572**	Urban Demography	Focuses on basics of demographic analysis, including natality, migration, and mortality. Emphasizes use of demographic analysis for urban problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**573**	Advanced Regression	Examines more advanced regression topics, such as limited dependent variable analysis, time-series analysis and forecasting techniques, and simultaneity.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 502 with C or better
PAF	**574**	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**579**	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	L	
PAF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	**601**	Seminar:Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**602**	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral PAF student
PAF	**603**	Seminar: Organization and Behavior in the Public Sector	Structure, organization, conduct, and performance of public sector institutions in the administration of public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral student
PAF	**604**	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student; PAF 602
PAF	**610**	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PhD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	**620**	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student
PAF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-15		
PAF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Public Affairs	1-15		
PE	**123**	Tumbling		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Kinesiology	0.5		
PGM	**100**	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**110**	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**111**	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**112**	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**113**	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**114**	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**120**	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**130**	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**150**	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**166**	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**200**	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**250**	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**300**	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**350**	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGM	**367**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**400**	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**466**	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
PGM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**244**	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PGS	**270**	Psychology of Adjustment	Principles of mental health, adjustment, conflict, stress, and coping processes derived from clinical and experimental research. Intended for nonmajors; cannot be used for major credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	

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PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**351**	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes. Open only to students without previous credit for PGS 350.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	
PGS	**365**	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 315 (or 350 or 351) with C or better; PSY 290 with C or better
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**414**	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PSY 290 with C or better
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**441**	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**445**	Child Language and Drawing	Language acquisition and developmental changes in drawing, considered in the context of cognitive developmental stages. Children's representation and communication of knowledge through language and drawing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**451**	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**461**	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PSY 290 with C or better; PGS 350 or 351 with C or better
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**464**	Minority Issues in Psychology	Psychological issues relating to the diversity of human cultural experiences among ethnic minorities in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled

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PGS	**467**	Psychology of Magical Beliefs	Psychological nature and bases of magical beliefs and their impact on health behaviors, eating practices, and interpersonal relations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 315 (or PGS 466 or PSY 434) with C or better; PSY 290 with C or better
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must be a Graduate student, either degree seeking or non degree seeking
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**250**	Psychology and Society	Addresses how social and behavioral science theory and research are used to understand behavior related to various social issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**370**	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**473**	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101 with C or better; PGS 341 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**480**	Cross-Cultural Social Psychology	Focuses on patterns of social behavior in individualistic and collectivistic cultures. Includes multidisciplinary research using qualitative and quantitative methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: PGS 101 with C or better; PGS 350 with a C or better
PGS	**482**	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 350 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PGS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PGS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGV	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**300**	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L	
PHI	**301**	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**302**	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**304**	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**305**	Ethical Theory	Current theories about the nature of morality (metaethics) and about what is right and wrong (normative ethics).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**307**	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**308**	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**309**	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**310**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**312**	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**315**	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**316**	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**317**	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**319**	Philosophy of Computing	Philosophical problems surrounding the theory of computation. Turing machines, mind and AI, neural network computing, ethics, and epistemology of computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	CS	
PHI	**320**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**325**	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
PHI	**333**	Introduction to Symbolic Logic	Symbolic techniques, emphasizing deductions and proofs in the propositional and 1st-order predicate calculi.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**335**	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**390**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
PHI	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only PHI 391 or REL 391
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**401**	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**402**	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**403**	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**413**	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

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PHI	**420**	Topics in Philosophy	Course descriptions on file in department. May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 314 with a C or better. Students who have credit for MIC 428, may not enroll in PHI 428
PHI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
PHI	**493**	Honors Thesis		N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
PHI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
PHI	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-reqiuistes: AEP 501 and AEP 502 with a D or better; students who have credit for PHI 550 or REL 585, may not enroll in AEP 550
PHI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

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PHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**360**	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Must have completed ENG 101, or 105 with a grade of C or greater, or be currently enrolled in ENG 101, or 105
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHL	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHL	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHS	**110**	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in physical science and physics. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	3.	C	
PHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**505**	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**531**	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**534**	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**540**	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**542**	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**550**	Physics and Astronomy	Astronomy curricula and projects for secondary school, with emphasis on the role of physics in astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**556**	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**560**	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**564**	Light and Electron Optics	Principles and practice of electron-optical instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**570**	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**581**	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHY	**105**	Basic Physics	One-semester survey of the principles of physics. Primarily for students who intend to take PHY 121, 131 but have not taken high school physics.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**150**	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 270 or MAT 290 with C or better
PHY	**151**	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 271 or MAT 266 with C or better; PHY 150 or PHY 121 and PHY 122 with C or better
PHY	**190**	Seminar: Physics as a Curriculum and a Profession	Seminar for new Physics majors. Instruction and information on curriculum, departmental functions, and professional preparation. Weekly meetings and excursions. Pass/fail grading.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**201**	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	CS	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	**241**	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 131
PHY	**252**	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY131 and PHY132) with C or better
PHY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**302**	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY201 with C or better
PHY	**310**	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	**311**	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	**314**	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	**315**	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**333**	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY132 with C or better
PHY	**334**	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY 132 with C or better
PHY	**361**	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**412**	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**416**	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**420**	Research Paper	Scientific report writing. Culminates in a paper based on library or lab research or both. Taken in conjunction with other courses as approved.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	L	
PHY	**441**	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**452**	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**462**	Subatomic Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**465**	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 334 with C or better
PHY	**466**	Advanced Laboratory III	Continuation of PHY 465. fee	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisite: PHY 465 with C or better
PHY	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**481**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 481 or 511.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**482**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 482 or 512.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 481 with C or better. Students who have credit for PHY 512, or MSE 527, or NAN 512, may not enroll in PHY 482
PHY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Pre-requisites: Must be an Honors student
PHY	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		

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PHY	**495**	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**501**	Methods of Computational and Theoretical Physics	Analytic and computational approaches to problems in classical and quantum physics. Topics may include numerical analysis, molecular dynamics, Monte Carlo simulations, density functional theory, high performance computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**502**	Methods of Theoretical Physics	Continuation of PHY 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 and PHY 315; Credit is allowed for only NAN 511, MSE 526, PHY 481 or PHY 511.
PHY	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**521**	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**523**	Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**531**	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**532**	Advanced Topics in Electrodynamics	Electromagnetism of dielectric media, magnetic media, and superconductors; introduction to magnetohydrodynamics, laser physics, and nonlinear optics; additional special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**541**	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
PHY	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	**551**	X-Ray and Electron Diffraction	Fresnel and Fraunhofer diffraction in integral formulation; diffraction of x rays and neutrons by crystal lattices; structures of solids, including crystal structure analysis; theory and techniques of electron microscopy/diffraction of crystalline/noncrystalline specimens.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		If you have credit for MSE 552, or NAN 552, or SEM 552, you may not enroll in PHY 552
PHY	**553**	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**555**	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**561**	Nuclear Physics	Properties of nuclei, conservation laws, internucleon forces, nuclear structure models, reactions and decays, quark model with applications to nuclei.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**562**	Nuclear Physics	Continuation of PHY 561.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**567**	Relativistic Quantum Mechanics and Field Theory	Relativistic quantum mechanics and introduction to the quantum field theory of scalar, spinor, and electromagnetic fields. QED through renormalization theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**568**	Particle Physics Phenomenology	Hadron physics, internal symmetry groups, weak interactions, lepton and quark phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**569**	The Standard Model and Beyond	Introduces and applies the standard model of strong and electroweak interactions. Special topics include recent developments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
PHY	**576**	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**577**	Advanced Quantum Theory	Scattering in three dimensions, second quantization of bosons and fermions, quantization of electromagnetism, addition of angular momenta, electronic structure of atoms and molecules, introduction to relativistic quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**581**	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**582**	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**587**	Quantum Optics	Quantization of the electromagnetic field. Quantum theory of coherence, photon counting, photon states, lasers, density operators, and atomic Raman scattering.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**588**	Quantum Optics	Continuation of PHY 587.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		

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PHY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: must have completed PHY 111 with a grade of C or greater, or be currently enrolled in PHY 111
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PLA	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Pre-Landscape Architecture student
PLA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**222**	Computers in Landscape Architecture	Computer applications in landscape architecture including CAD, GIS, graphics, and visualization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	
PLA	**240**	Landscape Survey Techniques	Develops landscape survey skills including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**261**	Landscape Architecture I	Landscape communication: communication techniques for urban planning and landscape architecture. Credit is allowed only for PLA 261 or PUP 261.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		
PLA	**262**	Landscape Architecture II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		

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PLA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction. Studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**412**	Landscape Ecology and Planning	Reviews the evolution of landscape ecology and landscape planning and examines use and value.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**413**	Southwest Landscape Interpretation	Explores methods and implications of landscape interpretation within the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
PLA	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems. Lecture, studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**462**	Landscape Arch VI	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student; Must have completed PLA 461 with a grade of C or greater or be currently enrolled
PLA	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12	G	
PLA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
PLA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
PLA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
PLA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**108**	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
PLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**200**	Biology of Plants	Analyzes the structure/function interaction for plant cells and tissues and properties that emerge in whole plants. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SQ	
PLB	**201**	Biology of Plants Laboratory	Lab/field experiments to teach techniques and protocols of the scientific process; reinforces concepts from lecture by asking questions and solving problems. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SQ	
PLB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L or SG	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**302**	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**304**	Biology of Algae and Fungi	Ecology, economics, and evolutionary diversity of the algae and fungi. Traditional and modern biotechnological uses.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**305**	Desert Annuals and Cacti	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**306**	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**320**	Environmental Science (Nonmajor)	Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
PLB	**322**	Environmental Science (Major)	Nature of environmental and biological interaction: historical and modern examples, regional and global issues. Participation in environmental problem-solving activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	**400**	Lichenology	Chemistry, ecology, physiology, and taxonomy of lichens.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**401**	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in plant biology; requires weekly reflective reading and writing.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**404**	Phycology	Algae (both fresh water and marine forms), emphasizing field collection and identification of local representatives. Morphological, ecological, and economic aspects of the algae. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**407**	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**410**	Angiosperm Taxonomy	Principles underlying angiosperm phylogeny.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: PLB 310 with C or better
PLB	**411**	Trees and Shrubs of Arizona	Identification of woody plants from desert, chaparral, and forest habitats in Arizona. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**416**	Medical Botany	Explores plants affecting human health: modern- and folk-usage medicinal plants. Quality control, clinical evidence, plant chemistry, and ethnopharmacology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**420**	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**421**	Plant Ecology: Communities and Ecosystems	Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystems emphasizing the role of vegetation. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better

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PLB	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Students who have credit in GPH 422, may not enroll in PLB 422
PLB	**430**	Statistical Analyses in Environmental Science	ANOVAS, 1-way classification of factorial and partially hierarchic designs; introductory multivariate statistics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
PLB	**432**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: C or better in:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
PLB	**434**	Landscape Ecological Analysis and Modeling	Technical methods of landscape ecological analyses. Includes mathematical and statistical examination and modeling of landscape ecological patterns and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**440**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better; Students who have credit in BIO 464, may not enroll in PLB 440
PLB	**444**	Plant Growth and Development	Molecular basis of development, role of signal transduction pathways/gene regulation in control of organ formation, pollination, germination, and growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 353 with C or better
PLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors Student
PLB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
PLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
PLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	**502**	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
PLB	**540**	Plant Biochemistry	Structure/function relationships of molecules, emphasizing processes unique to plants: carbon fixation, synthesis of storage products, pigments, and secondary metabolites.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**550**	Plant Molecular Biology	Biochemistry and molecular biology of plant organelles, including protein targeting, plant viruses, and molecular designs for plant improvements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**552**	Plant Genetic Engineering	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**553**	Plant Genetic Engineering Laboratory	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**554**	Plant Biotechnology	Aseptic, clonal propagation of plants and in vitro culture of cells, organs, and tissues.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**558**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		

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PLB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	L or SG	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLC	**101**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**102**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 101 with D or better or currently enrolled
PLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**201**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**202**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 201 with D
PLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	**492**	Honors Directed Study		N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
PLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
PLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
POR	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:POR 101 with a grade of C or better or currenlty enrolled
POR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**313**	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 201 with C or better
POR	**314**	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 313 with C or better
POR	**321**	Luso-Brazilian Literature	Representative masterpieces of Portuguese and Brazilian literature from the beginning to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: POR 313 with C or better
POR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**472**	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites: POR 313 with C or better
POR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
POR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
POR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
POR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.	G	
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**220**	Political Issues and Public Policy	Contemporary social problems and political issues, particularly development of public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L or SB	
POS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	
POS	**270**	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**300**	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**301**	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**305**	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**311**	Arizona Constitution and Government	Constitution and government of the State of Arizona. Credit is allowed for only POS 311 or 316 or 417. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2.		
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**315**	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**316**	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States. Credit is allowed for only POS 316 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**320**	Public Administration	Role of the administrator in the political process with an examination of the basic concepts of bureaucracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**330**	Contemporary Controversies in Domestic Politics	Explores key controversies in domestic politics including the environment, the economy, poverty, gender, race, and security.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**332**	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**333**	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**340**	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**341**	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**355**	Russia and Successor States	Description and analysis of political institutions and practices in Russia and successor states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**356**	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**357**	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**358**	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**359**	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Sahara Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**368**	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**369**	War, Politics, and Society	Relationships between techniques/technology of war and political/social structures in different time periods and locations. Who commands, dies, and pays?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**370**	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**401**	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	CS	Pre-requisite: POS 301
POS	**410**	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**426**	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**431**	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**435**	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**439**	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**442**	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**443**	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**445**	Asian Political Thought	Contemporary political ideas and theories in selected Asian countries, including the impact of Marxist and non-Marxist theories on revolutionary processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**451**	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**452**	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**453**	South America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**455**	Central America and the Caribbean	Governmental institutions, political processes, and developmental problems of the nation-states and dependent areas of Central America and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**459**	South and Southern Africa	Post-apartheid South African government and politics; South Africa and the southern African region; regional security and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**463**	Inter-American Relations	Diplomatic relations among the Latin American states. Development of U.S. foreign policy toward Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**465**	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**467**	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**468**	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**471**	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**472**	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**485**	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**501**	Methods of Political Science	Problems of method and knowledge in political science, strategies of political inquiry, and issues in philosophy of social science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**502**	Philosophy of Political Inquiry	Problems of knowledge and method in political science, with attention to both empirical and evaluative analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2-3		
POS	**503**	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**530**	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**545**	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**550**	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**560**	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**563**	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**601**	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**602**	Advanced Survey Research	Presents design and conduct of political surveys, including sampling, instrument design, scaling, and statistical and graphical analysis of survey data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**603**	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**604**	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**606**	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**635**	State Politics and Public Policy	Introduces comparative state policy emphasizing policy or performance differences among the states and the reasons for these differences.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**636**	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**638**	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**651**	Politics of Change and Development	Examines contending approaches to national, social, and political change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**660**	The Modern World System	Theoretically driven, historical analysis of the organization and operation of the international political economy since the 16th century.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**661**	The State	Examines theories of state, state-society relations, and interstate politics emphasizing questions of sovereignty, territoriality, violence, representation, democracy, and change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**662**	International Organization	History, practical political significance, and future of international institutions, transnational regimes, and other approaches to international organization.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**664**	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**665**	foreign Policy Theory	Examines foreign policy theory and methods. Development and critique of research designs analyzing foreign policy processes within and among nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	
POS	**247**	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & G	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**342**	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU or SB	
POS	**343**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**354**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**362**	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems. Credit is allowed for only POS 362 or 160.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Credit is allowed for only POL 360, POS 160 or POL 160.
POS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**430**	Race and Politics in the Americas	Studies racial politics in North, Central, and South America with a focus on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**436**	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**437**	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**438**	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**440**	Political Futures through Science Fiction	Examines the relationship between politics and science fiction literature and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or HU	
POS	**444**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**446**	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**456**	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**460**	Politics of Globalization	Theories and analysis of the politics of economic and technological globalization in the contemporary world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**464**	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**470**	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
POS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PPE	**550**	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 550 or 350. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**555**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 555 or 355. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**560**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 560 or 360.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**565**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards. Credit is allowed for only PPE 565 or 365.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**570**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 570 or 370.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**575**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 575 or 375.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**576**	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**585**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields, with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**593**	Applied Project		Y	LEC	Y	CNV	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**210**	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**215**	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**220**	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**225**	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**350**	Physical Education for the Elementary School	Scope and values of physical in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 350 or 550. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Students who have credit for PPE 550, may not enroll in PPE 350
PPE	**355**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 355 or 555. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**360**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 360 or 560.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**365**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**370**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 370 or 570.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**375**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 375 or 575.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**474**	Field Experience in Physical Education	Analyzes course content in an elementary/secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		
PPE	**480**	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
PPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**495**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PRM	**120**	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**150**	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
PRM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**210**	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD, NLM, PRM or TDM 301
PRM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
PRM	**303**	Program Planning	Foundations for effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: NLM 160 or PRM 120 with C or better
PRM	**304**	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Parks & Rec Mgmt, Rec & Tourism or Nonprofit Leadership & Mgmt student; Minimum 2.50 cumulative GPA; Minimum 45 hours; MAT 142 or better; PRM 210 (or NLM 210, TDM 210) with C or better
PRM	**315**	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM120 (REC120) with C or better
PRM	**340**	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	FLD	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**364**	Foundations of Therapeutic Recreation	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**368**	Sports Management	Introduces concepts of sports management in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PRM	**370**	Natural Resource Recreation Planning and Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed 45 or more earned hours
PRM	**380**	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB & H	
PRM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**400**	Processes and Techniques in Therapeutic Recreation	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have completed PRM364 or REC364 with a grade of C or greater or be currently enrolled
PRM	**401**	Tourism Management	Principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 210 or PRM 210 with C or better; TDM 301 or PRM 301 with C or better; PRM 303 or TDM 372 with C or better. Students who have credit for TDM 401, may not enroll in PRM 401
PRM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better; Credit is allowed for only NLM 402, PRM 402 or TDM 402
PRM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 303 or TDM 372 with C or better; Students who have credit for TDM 403 or NLM 403 may not enroll in PRM 403
PRM	**406**	Program Design and Evaluation in Therapeutic Recreation	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: PRM 364 (or REC 364) and PRM 400 (or REC 400) with C or better if completed
PRM	**424**	Recreation Program Management	Provides nonmajors with an in-depth look at recreation program management in a variety of settings with diverse groups.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 160 or PRM 120 (REC 120) with C or better or currently enrolled; Not open to Parks & Recreation Management, Recreation (Management concentration) or Nonprofit Leadership & Management majors.
PRM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**460**	Assessment and Documentation in Therapeutic Recreation	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 364 (REC 364) and PRM 400 (REC 400) with C or better or currently enrolled
PRM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Parks and Recreation or Recreation (Management concentration) student; PRM 402 (REC 482) and PRM 403 (REC 499 Pre Internship Workshop) with C or better
PRM	**470**	Environmental Interpretation and Education	Introduces park interpretation and environmental education that includes theories, principles, and techniques.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 380 with C or better
PRM	**475**	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or REC 120 with C or better
PRM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
PRM	**486**	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
PRM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
PRM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PRM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
PRM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned C or better in PSY 290 or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**360**	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisite- Mus have earned C or better in PSY 290 or currently enrolled
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**438**	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**439**	Training and Skill Acquisition	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**440**	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**448**	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**449**	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**477**	Applied Psychology Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-6		
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-3		

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PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**560**	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**561**	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**562**	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**563**	Advanced Industrial and Organizational Psychology	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Tech & Innovation	Faculty of Applied Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman; 25 or less total earned hours
PSY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**231**	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	CS	Pre-requisites: Barrett Honors student; MAT 119, MAT 170, MAT 242, MAT 251 or higher with C or better; PGS 101 with C or better
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**420**	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 and 320 with C or better
PSY	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed KIN 345 with a grade of C or greater or be currently enrolled
PSY	**424**	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 325 with C or better
PSY	**426**	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must have completed PSY 325 with a grade of C or greater or be currently enrolled
PSY	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for MIC 427, may not enroll in PSY 427
PSY	**434**	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 323 or PSY 324 with C or better
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 325 AND one of the following: BIO 181, 182, 187, 188, 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with a grade of C or greater or be currently enrolled
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**501**	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**506**	Survey of Research in Environmental Psychology	Major topics and paradigms in the study of person-environment relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**512**	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**524**	Advanced Physiological Psychology	Contributions of physiological processes and brain function to fundamental behavioral processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**532**	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**533**	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**534**	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**535**	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**536**	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**537**	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**538**	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**541**	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**542**	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**551**	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**553**	Social Influence	Researches literature relevant to attitude formation and change, conformity, obedience, power, compliance, and altruism and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**555**	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**569**	Advanced Study of Personality	Personality as a theoretical concept in psychology, including definitional problems, behavioral and traditional approaches, the measurement of personality, and current research issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**572**	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**574**	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**576**	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**578**	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**582**	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**624**	Clinical Neuroscience	Examines the biological underpinnings of psychological disorders at the molecular, cellular, and system levels (e.g., schizophrenia, depression, anxiety).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		
PSY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		
PSY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		

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PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 210, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101, PSY 230 and PSY 290 with a C or better or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**369**	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY (PGS) 101 with C or better; completed one semester of Biology
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: PSY 325 with C or better
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have completed PSY 325 AND one of the following: BIO 181, 182, 187, 188, 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with a grade of C or greater or be currently enrolled
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PSY	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: PGS 399 with C or better
PUB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	**501**	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PUB	**502**	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**503**	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUB	**510**	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	DIS	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**580**	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**592**	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**190**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
PUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**200**	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**261**	Urban Planning I	Planning communication: communication techniques for urban planning and landscape architecture communication. Credit is allowed only for PUP 261 or PLA 261.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**262**	Urban Planning II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**301**	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
PUP	**322**	Computers in Planning	Planning methods using Geographic Information Systems, database, spreadsheet, image manipulation, and desktop publishing computer software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**361**	Introductory Urban Planning Studio	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills. Fee.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**362**	Urban Planning III	Neighborhood planning: local community plan making; urban development and neighborhood improvement. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Urban Planning undergraduate student; PUP 361 with C or better
PUP	**363**	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Design Studies, Urban Planning or Housing & Urban Develpmnt undergraduate student
PUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**410**	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**412**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or HU) & H	Pre-requisites: Urban Planning, Design Studies, Landscape Architecture or Architectural Studies undergraduate student
PUP	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU	Pre-requisite: PUP 301 with C or better
PUP	**424**	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**425**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Must be one of the following students: Urban Planning BA, Landscape Architecture BSLA, Architectural Studies BSD or Housing & Urban Develpmnt BSD
PUP	**430**	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**432**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**433**	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**434**	Urban Land Economics	Interaction between space and economic behavior. Examines the use and value of land through economic theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Urban Planning undergraduate student
PUP	**436**	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**441**	Economic Concepts and Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite:PUP 301 with a grade of C or better
PUP	**442**	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**444**	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Must be one of the following Academic Levels: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**445**	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**452**	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisite: PUP 301 with C or better
PUP	**461**	Urban Planning IV	Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Uban Planning undergraduate student; PUP 362 with C or better
PUP	**462**	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	**465**	New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a grade of C or better
PUP	**475**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: PUP 301 with C or better. Students who have credit for PUP 585, may not enroll in PUP 485
PUP	**492**	Honors Directed Study		N	IND	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
PUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**501**	The Idea of Planning	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**510**	Citizen Participation	Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**515**	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**516**	International City Design	Comparative exploration of the physical design and structure of international cities and the social, economic, and cultural forces shaping them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**520**	Planning Theories and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**524**	Planning Methods I	Methods for urban planning research. Emphasizes research design, demographic analysis, forecasting, and survey research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**525**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**526**	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**527**	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**531**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**532**	Advanced Urban Planning Law	Advanced study on selected issues in planning law, such as urban design controls, exclusionary practices, compensable regulation, and tax policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**541**	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**542**	Environmental Administration and Planning	Environmental administration of policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**544**	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**546**	Urban Design Policy	Advanced study of local, state, and federal urban design policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**548**	Planning for Urban Environmental Sustainability	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**550**	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**551**	Sustainable Transportation Planning	Discusses the sustainability aspects of transportation planning. Emphasizes nonmotorized transportation, facilities, and public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**561**	Urban Design Studio	Current urban form and urban landscape design problems within the Phoenix-centered region.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**562**	Advanced Theory of Urban Design	Study of urban design practice and underlying social, political, and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**563**	The Politics of Urban Space and Design	Advanced seminar critically examines major intellectual traditions investigating urban form, the production of urban space, and socio-spatial practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**572**	Planning Studio I: Data Inventory and Analysis	Comprehensive planning workshop dealing with real community problems. Focuses on the data gathering and analysis steps of the planning process. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**574**	Planning Studio II: Options and Implementation	Comprehensive planning workshop dealing with real community problems. Focuses on the development of options, plan making, and plan implementation. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**575**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**576**	GIS Studio	GIS as a tool to address large, multifaceted planning problems.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate Liberal Arts student
PUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmntl Planning MUEP student
PUP	**585**	International Field Studies in Planning		N	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Must be graduate student. Students who have credit for PUP 485, may not enroll in PUP 585
PUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**622**	Planning Methods II: Quantitative Planning Analysis	Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 524 with C or better
PUP	**642**	Land Economics	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**644**	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
QBA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**221**	Statistical Analysis	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must have completed one of the following courses with a grade of D or greater or be currently enrolled: MAT 119, MAT 211 or MAT 271
QBA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Must be an Honors student
QBA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**502**	Managerial Decision Analysis	Fundamentals of qualitative and quantitative analysis to aid management decision making in a competitive and uncertain environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA student
QBA	**508**	Product and Service Innovation	Develops strategies for innovation in products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		W.P. Carey Graduate Students only
QBA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
QBA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	**505**	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**507**	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**512**	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**521**	Assisting the Struggling Adolescent Reader	Familiarizes teachers with literacy interests, practices, methods, strategies, and resources to develop and enhance students' enjoyment of learning with texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis).	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**530**	Research Issues in Literacy	For graduate students interested in research on major issues related to literacy instruction. Seminar activities include reviewing quantitative and qualitative methods and analyzing literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**534**	Literacy in Science and Math		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
RDG	**550**	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556**	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
RDG	**557**	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**581**	Literature-Based Reading Programs		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**596**	Gender, Culture, and Literacies	Influence of gender and culture on written, oral, and post-typographical texts.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**630**	Research in Literacy	For advanced graduate students interested in applied research problems, literature of literacy instruction, and major issues related to literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Credit is allowed for only EDT 634 or RDG 634
RDG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
RDG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**531**	Language and Literacy I	Instructional strategies for teaching reading using systematic, research-based phonics to aid decoding, vocabulary, comprehension development, writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**532**	Language and Literacy II	Applies literacy strategies including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, and extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**550-W**	Practicum Experiences in Reading	Experience utilizing reading diagnostic and instructional techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556-W**	Assessment Procedures in Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RDG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**301**	Literacy and Instruction in the Content Areas	Required course for all Secondary Education candidates. Introduces theory and instructional strategies for learning from text across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**322**	Language Literacy 1 in Elementary Schools	Instructional strategies for teaching reading using systematic research-based phonics to aid decoding; vocabulary; and comprehension development; writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**323**	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**334**	Children'sLiterature and Elementary School Curriculum	Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	HU	
RDG	**413**	Language Literacy 2 in Elementary Schools	Applies literacy strategies, including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**414**	Teaching Reading and Decoding	Emphasizes teaching reading as part of an integrated classroom curriculum. Includes strategies and skills for teaching decoding (phonics), vocabulary, comprehension, study skills, and content area reading.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**440**	Computer Gaming, Learning, and Literacy	Examines the principles of learning underlying well-designed video and computer games. Addresses the literacies involved in such games.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**481**	Reading Practicum		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
RDG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
RDG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RE	**302**	Life and Letters of Paul		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Supply Chain Management	3.		
RE	**584**	Internship		Y	LEC	Y	CNV	W.P. Carey School of Business	Department of Supply Chain Management	3.		
REA	**300**	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
REA	**331**	Real Estate Finance	Legal, market, and institutional factors related to financing proposed and existing properties. Emphasizes current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student. In addition to individual course prerequisites, nonbusiness students must have at least a 2.50 ASU cumulative GPA, a 2.50 ASU business GPA, and 56 earned semester hours to register for any upper-division business course unless otherwise noted.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
REA	**380**	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	**401**	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**441**	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REA	**456**	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
REA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
REA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
REC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**501**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
REC	**502**	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**530**	Recreation and Tourism Service Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**552**	Critical Issues in Recreation and Tourism	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**555**	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**569**	Advanced Tourism Studies	Advanced survey of tourism literature with an emphasis on relevant theories, concepts, and current research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**570**	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**579**	Tourism Analysis	Examines theories and methods that govern tourist behavior and their relevance to destination development, operations, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		

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REC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
REC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
REC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		
REC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
RED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
RED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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REL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites:Total Earned Hours must be less than or equal to 75 Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**205**	Living and Dying	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world. Lecture, discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**210**	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**225**	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
REL	**260**	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**301**	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**305**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	**314**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**317**	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**318**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C	

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REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	
REL	**323**	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**324**	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**326**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**330**	Native American Religious Traditions	Presents world views and religious thought through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**331**	History of Native American Religious Traditions	Role of religion in Native American history, including missionization; religious adaptation; and prophetic, messianic, and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	
REL	**332**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**343**	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G & H	Pre-requisites: ENG 102 or 105 or 108 with a C or better
REL	**344**	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**346**	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**350**	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	
REL	**351**	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	
REL	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**355**	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**356**	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better or currently enrolled
REL	**357**	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L & G	Pre-requisties:ENG 102, (or 105, or 108) with a grade of C or better
REL	**365**	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**366**	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**372**	formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**373**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**375**	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	**377**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**379**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**380**	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**382**	Religion, Magic, and Science	Relationship and conflict among religion, magic, and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**383**	Origins, Evolution, and Creation	Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and scientific creationism in American culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**384**	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**385**	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**386**	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
REL	**388**	Religion, Ethics, and International Politics	Explores the religious and ethical dimensions of international politics by examining historical and contemporary ideas, movements, issues, and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or ENG 105, or ENG 108, with a grade of C or better, or be currently enrolled
REL	**393**	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**395**	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with C or better
REL	**396**	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**400**	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be a Religious Studies student
REL	**405**	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Religious Studies undergraduate student
REL	**410**	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**427**	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**430**	Mesoamerican Shamanic Cosmographies	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**444**	Religion in Japan	Religion in Japanese history, especially the development of Japanese Buddhism, and religion in the modern transformation of Japan.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**460**	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**461**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only AFS 480, SGS 442 or REL 461
REL	**470**	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**471**	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**480**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	G	
REL	**482**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	**483**	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
REL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**501**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
REL	**502**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**581**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**582**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**585**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-reqiuistes: AEP 501 and AEP 502 with a D or better; students who have credit for PHI 550 or REL 585, may not enroll in AEP 550
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**603**	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Phd or Masters student in Religious Studies
REL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**720**	Approaches to North American Religious History	Traces narratives and approaches to imagine and reimagine the "plot" of American religious history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: PhD in Religious Studies student
REL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**300**	Research, Writing, and Thinking in Religion and Applied Ethics	Theoretical and methodological tools to study world religions' beliefs, practices, and communities and their intersections with ethical perspectives on problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**305**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C & H	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater or be currently enrolled.
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**490**	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	THE	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
REL	**492**	Honors Directed Study		Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**305**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C & H	
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Minimum CUM GPA of 2.00
ROM	**101**	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**201**	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**313**	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 201
ROM	**314**	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 313
ROM	**411**	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	**412**	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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ROM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RTM	**120**	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in quality of life, socially, historically, psychologically, culturally, economically, and politically.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
RTM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
RTM	**210**	Leisure Delivery Systems	Introduces development, management, and organization of the public, not-for-profit, and private sectors for the leisure services profession.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
RTM	**301**	Leadership in Recreation and Tourism	Leadership theory and strategies applied to recreation and tourism settings, emphasizing group dynamics, motivational processes, and supervisory skills.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have a GPA of 2.0 or greater
RTM	**302**	Recreation and Tourism for Diverse Populations	The role of recreation and tourism in serving the needs of culturally, physically, emotionally, mentally, and demographically diverse populations. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre-requisites: must have a GPA of 2.0 or greater
RTM	**303**	Programming Recreation and Tourism Services	Foundations for effective programming of leisure services in public, not-for-profit, and private sectors. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**304**	Recreation and Tourism Areas and Facilities Management	Principles of management, care, function, and maintenance of recreation and tourism areas, facilities, and resources. Field and classroom based.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	
RTM	**320**	Talent and Entertainment Concepts	Provides theory and skill development focused on management, marketing, finances, facilities, equipment, and operations related to coordinating entertainment elements.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 486 (or RTM 486) with C or better
RTM	**321**	Event Protocol, Ethics, and Etiquette	Theoretical and practical focus on the special elements of protocol, ethics, and etiquette as they apply to special events management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**322**	Special Event Programming	Provides a theoretical and practical base related to planning, organization, and coordination of activity elements that comprise the special events program.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**323**	Special Event On-Site Operations	Theory and practical skills focused on security, parking, traffic, waste management, transportation, communication, storage, and other operational issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**324**	Festival Site Design	Provides both a theoretical basis and practical skills focused on how to physically design and lay out a special event.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**325**	Working with Subcontractors and Vendors	Theory and skills focused on equipment rentals, food and beverage vendors, arts and crafts vendors, commercial vendors, and other subcontracted entities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**326**	Sponsorship	Provides theory and practical skills focused on selling, partnership, benefit/assets, and leverage concepts of sponsorship for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better

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RTM	**327**	Creative Event Revenue Production	Provides both theoretical and practical skills focused on earned income and other alternative financing for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**328**	Budgeting and Accounting for Special Events	Focuses on details related to budgeting, accounting, and financial controls used in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**355**	Team-Building Strategies	Explores the concepts and strategies for facilitating team building, self-confidence, and positive self-esteem in situations across the lifespan.	N	LEL	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	FLD	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**373**	Leisure Travel and Tourism	Examines leisure travel and tourism, tourist behavior, and the effect of tourism on communities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
RTM	**388**	Business Practices for Special Event Management	Emphasizes personnel, strategic planning, marketing, risk management, legal issues, and professionalism in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
RTM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
RTM	**401**	Administration of Recreation and Tourism Services	Basic application of management principles to recreation and tourism services. Includes budgeting, personnel actions, legal issues, and public relations. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: RTM, PRM or TDM student; must have at least 2.50 ASU cumulative GPA; 45 or more semester hours; ENG 102 and PRM 210 or TDM 210 with C or better; MAT 142 or higher with D or better
RTM	**402**	Evaluation and Assessment in Recreation and Tourism	In-depth development of a program evaluation. Specification of objectives, instrument development and administration, data analysis, and reporting findings.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre- or Co-requisites: PRM 304 or PRM 401 with a C or better if completed
RTM	**403**	Professional Development Seminar	Emphasizes current professional issues and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites:must be a BS student in Recreation & Tourism Mgt
RTM	**404**	Marketing Recreation and Tourism	Principles of marketing and promotional strategy for recreation and tourism operations. Emphasizes case study experience with leading professionals.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**450**	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**453**	Volunteer Management in Human Service Organizations	Administration of volunteer service programs. Study and analysis of volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**454**	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**458**	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
RTM	**475**	Entrepreneurial Recreation and Tourism	Examines the development, management, and future of for-profit ventures in recreation and tourism.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Recreation & Tourism Mgt students
RTM	**486**	Special Events Management	Principles of programming and managing special events for diverse populations. Class plans, conducts, and evaluates a community special event. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
RTM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student

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RTM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
RTM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		Pre-requisites: must have a GPA of 2.0 or greater
RTM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
RTM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**580**	Practicum		N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
RTM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
RUS	**101**	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**102**	Elementary Russian	See RUS 101. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**201**	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**202**	Intermediate Russian	See RUS 201. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**211**	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**212**	Basic Russian Conversation	See RUS 211. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**311**	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better

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RUS	**312**	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**321**	Foundations of Russian Literature	Literary movements, prose, poetry, and drama from early Kievan writings to 19th-century works of Pushkin, Lermontov, Gogol. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	
RUS	**322**	Great Russian Writers of the 19th Century	Surveys the great age of prerevolutionary Russian prose, including works of Gogol, Turgenev, Dostoevski, Tolstoy, and Chekhov. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**323**	Modern Russian Literature and the Soviet Legacy	See also SLC 323. 20th-century Russian writers: their prose, poetry, drama; problems of the writer in Soviet and post-Soviet society. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
RUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**411**	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**412**	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**417**	Applied Russian Phonetics	General improvement in the student's language skills through aural/oral training in Russian phonology and an analysis of Russian orthography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites: RUS 102 with C or better
RUS	**420**	Russian Poetry	Development of Russian poetry from its beginnings to the present, including both native and emigre poets. Topics in criticism and the study of poetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**421**	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**423**	Dostoyevsky	Dostoyevsky's major works of fiction, including Crime and Punishment and Brothers Karamazov. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**424**	Tolstoy	Tolstoy's major works, including War and Peace and Anna Karenina. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**425**	Chekhov	Chekhov's major works, representative short stories and major plays, including The Cherry Orchard and Three Sisters. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**430**	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**441**	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
RUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
RUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**495**	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	**494**	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**496**	Study Abroad	Courses with the prefix SAO numbered 496 and 596 are reserved for Study Abroad Office study abroad and exchange programs. This is a placeholder course. Students must register for the number of credits equivalent to full-time study here at ASU. For most programs, participating undergraduate students register for 12 semester hours and graduate students register for 9 semester hours. Students participating in an SAO Study Abroad Program must register for the subtopic SAO: Study Abroad Program; participants in an SAO Exchange Program will register for the subtopic SAO: Exchange Program. Following completion of the student's international program, this course will be dropped and will be replaced by the ASU equivalencies of those courses completed on the program. In this way, actual credits and grades earned for particular courses completed on SAO programs will be recorded at ASU.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**596**	Study Abroad	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**598**	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**200**	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**300**	Interdisciplinary Approaches to Social and Behavioral Sciences	Interdisciplinary approach to the study of social life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**301**	Cultural Diversity	Socially structured differences in historical and cross-cultural perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & C	
SBS	**302**	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**303**	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	**304**	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	
SBS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SBS	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**351**	Population Geography	Demographic patterns. Spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: must have completed MAT 117,or119, or142, or 170,or 210 with a grade of C or greater; or be currenlty enrolled in one of these
SBS	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**404**	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: must have completed SBS 303 and SBS 304 with a grade of C or greater.
SBS	**410**	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**430**	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**440**	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**450**	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**460**	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**461**	Program Evaluation and Policy Research	Examines design, data collection/analysis, and political/ethical issues in planning and evaluating social programs and policies in community organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: AJS 302, COM 308, PSY 290, SBS 302 or SBS 303
SBS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SBS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SBS	**490**	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**491**	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SBS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SCM	**300**	Global Supply Operations	Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA; ACC 241 or ACC 271, CIS 105 or CIS 220 or CIS 236, and ECN 221 with a grade of C or greater.
SCM	**301**	Supply Chain Management	Examines the purchasing, materials, and logistics management areas. Presents techniques for acquiring, storing, processing, and moving material inventory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
SCM	**303**	Honors Global Supply Operations	Explores the principles, concepts, and tools of supply chain management, with emphasis on how these are applied in the business world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; ACC 241 or ACC 242 or ACC 271, and ECN 221 or ECN 231 with a grade of C or better
SCM	**345**	Logistics Management	Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisite: W.P. Carey Supply Chain Management BS student; Co- or Pre-requisite: SCM 300 or 303 with a grade of C or better or be currently enrolled or co-enrolled.
SCM	**355**	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	**415**	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites:SCM 300 or SCM 303 with a grade of C or better
SCM	**432**	Planning and Control Systems for Supply Chain Management	Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management. fee	N	LAB	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 345 with C or better; Pre/Co-requisite: SCM 355
SCM	**440**	Quality Management/Measurement	Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	**455**	Research and Negotiation	Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 355 with a grade of C or greater
SCM	**463**	Global Supply Chain Management	Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey BS or BA student; Must have completed SCM 300 with a grade of C or greater.
SCM	**479**	Supply Chain Strategy	Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 432 with a grade of C or greater
SCM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Pre-requisites: Must be an Honors student
SCM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite: SCM 300 or SCM 303
SCM	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
SCM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	**502**	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students

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SCM	**511**	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**515**	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**520**	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: SCM 502 with C or better
SCM	**521**	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**532**	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**541**	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**551**	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**581**	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**586**	High-Technology Project Management	Project management processes for high-technology organizations, including planning, scheduling, team development, and control.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**587**	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**588**	Strategic Project Management	Overview of strategic project management processes, project planning and control, project portfolio management, resource allocation, management of strategic project partners.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
SCM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SCN	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
SCN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
SCN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SCN	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SED	**502**	Equity in Mathematics and Science Education	Introduces equity issues in science and mathematics as they relate to gender, social class, and ethnicity. Examines current research in these areas.	N	DIS	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
SED	**522**	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student
SED	**523**	Middle School Curriculum and Organization	Overview of the organization, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**528**	Organizing and Managing the Middle/Secondary Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**529**	Dynamics of Effective Teaching	Explores and applies new research regarding learning, motivation, and retention. Has immediate application and results for classroom teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**530**	Introduction to Middle School Concept, Philosophy, and Curriculum	Overview of the concept, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**533**	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be a graduate student
SED	**544**	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**577**	Issues and Trends in Secondary Education	Analyzes lay and professional reports; problems and issues in American secondary education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**711**	Secondary Curriculum Development	Theories and processes of developing curriculum; evaluation of research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 522 and a Y in SED 478 or SED 578
SED	**722**	Improvement of Instruction in the Secondary School	Evaluates the research; issues and theories related to the improvement of instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 533
SED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**501**	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**520**	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**547**	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**560**	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**561**	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**576**	Field Experience	Applies course content in secondary and middle school science and mathematics classrooms: observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**578**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**579**	Apprentice Teaching in Secondary Education	Apprentice teaching in secondary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
SED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**321**	Critical Issues in Secondary Education	Examines perspectives of critical issues in contemporary education and encourages students to think critically and to develop their own viewpoints.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**322**	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**397**	Field Experience II	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**464**	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**478**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**480**	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**481**	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**482**	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**496**	Field Experience III	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SEM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-3		
SEM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		If you have credit for PHY 552, or MSE 552, or NAN 552, you may not enroll in SEM 552
SEM	**553**	Electron Microscopy Laboratory I	Lab support for SEM 552.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	1.		
SEM	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**555**	Electron Microscopy Laboratory II	Lab support for SEM 554.	N	LAB	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-12		

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SEM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SES	**100**	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	
SES	**101**	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
SES	**102**	Earth, Solar System, and Universe II	Continuation of SES 101. Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: SES 101 with C or better
SES	**103**	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3	SQ	
SES	**104**	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing. fee	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	**210**	Engineering Systems and Experimental Design	Scientific and engineering design process. Defining scientific problems, generating and evaluating engineering solutions. Computer modeling, technical writing and teaming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 113 or PHY 121 with D or better or currently enrolled; ENG 101, ENG 105 or ENG 107 with D or better or currently enrolled; MAT 265 or MAT 270 with D or better or currently enrolled
SES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**311**	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: MAT 265 or MAT 270; PHY 121 or CHM 113 or BIO 188
SES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**410**	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 311
SES	**411**	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SET	**540**	Explosives Surety	Physical and chemical nature of explosives; detonation models; initiating systems; commercial, military, and improvised explosives; investigations; and counter measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SET	**560**	Physical Security I	Systems engineering principles and concepts to guide the design, analysis, and implementation of protection systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**561**	Physical Security II	Scientific theory behind analysis of physical protection systems. Includes probability and statistics, data collection techniques, algorithm processing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**570**	Security System Instrumentation	Operating principles, limitations, and test procedures of security instrumentation and sensors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
SET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
SET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
SGS	**101**	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
SGS	**102**	Thinking Globally: Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**103**	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
SGS	**111**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
SGS	**294**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**301**	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
SGS	**303**	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	**304**	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 101 and ENG 102 with a C or better
SGS	**305**	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L	Pre-requisites:Eng 101 (or 107) and Eng 102 (or 105 or 108) with a grade of C or better
SGS	**310**	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites:SGS 101 or SGS 301 and SGS 103 or SGS 303 with C or better
SGS	**311**	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**320**	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**341**	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**343**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	**344**	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**381**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G & H	
SGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**441**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**442**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**454**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	May not enroll in SGS 454, if received credit for WST 447
SGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
SGS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
SGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		
SGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**102**	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 101 with C or better; taken within the past two years
SHS	**105**	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SHS	**201**	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 102 with C or better and taken within the past two years
SHS	**202**	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 201 with C or better and taken within the past two years
SHS	**250**	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**310**	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**311**	Physical and Physiological Bases of Hearing	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**350**	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**367**	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**375**	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310; SHS 311
SHS	**376**	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**401**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 401 or 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311 with D or better; Students who have credit for SHS 501, may not enroll in SHS 401
SHS	**402**	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 250
SHS	**431**	Developmental Speech Disorders	Introduces the nature of articulation, fluency, resonance, and voice disorders in childhood.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**450**	Observation	Opportunity to obtain observation experience at the ASU Speech and Hearing Center or at external sites.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**465**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	Pre-requisites: Credit is allowed for only SSH 465 or 565
SHS	**470**	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**485**	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310
SHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6	L	Pre-requisites: Must be an Honors student
SHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**496**	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311, 375 and 401 with "D" or better; Students who have credit for SHS 596, may not enroll in SHS 496
SHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-7		
SHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		
SHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		Pre-requisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**501**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 501 or 401.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 401, may not enroll in SHS 501. SHS 311 with C or better
SHS	**502**	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**504**	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**505**	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**508**	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**510**	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**511**	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student

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SHS	**512**	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**513**	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**515**	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**516**	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**517**	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**518**	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**519**	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**520**	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**521**	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**522**	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**523**	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 502 and SHS 513. SHS majors only
SHS	**524**	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2-3		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**525**	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**545**	Speech Perception by the Hearing Impaired	Focuses on the perception of speech by normal-hearing and hearing-impaired listeners.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**552**	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**555**	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**565**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 465, may not enroll in SHS 565
SHS	**566**	Psychology of Language	Psycholinguistic study of the production and comprehension of language across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**567**	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**570**	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**571**	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**572**	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**573**	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**574**	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**575**	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		

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SHS	**576**	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**577**	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**578**	Disorders of Voice	Communication disorders related to dysfunction of the phonatory and resonance systems of voice production, assessment, and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**579**	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**580**	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**581**	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**582**	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**584**	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**585**	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**586**	Language Sampling Methods in Speech-Language Pathology	Focuses on the use of language sampling and analyzes techniques to assess children's language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**587**	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**588**	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**589**	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**596**	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Credit is allowed for only SHS 496 or 596
SHS	**597**	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Must be a graduate student
SHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		
SLC	**150**	Introduction to East Asian Culture	Introduces the cultures of China, Japan, and Korea.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**201**	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU or SB	
SLC	**202**	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**323**	Survey of Literature of the Soviet Era in Translation	Surveys main literary movements, prominent authors, most significant works of prose, poetry, and drama of the Soviet period, 1917-1991.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**385**	Career Development for Language Majors	Theoretical and practical aspects of career planning and development; research focus on language-related careers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 101 or ENG 107 with D or better; ENG 102 or ENG 108 with D or better or currently enrolled
SLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**400**	Linguistics	Introduces the analysis of language and its use in social contexts. Topics: morphology, phonology, pragmatics, semantics, syntax, and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	Pre-requisite: Junior academic level
SLC	**401**	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**415**	Bilingualism and Languages in Contact	Analyzes linguistic aspects of bilingualism, e.g., pidgins and creoles, code-switching, and other contact phenomena; simultaneous/sequential bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better or currently enrolled
SLC	**420**	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**421**	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**440**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440

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SLC	**450**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200; ENG 200-level literature course, or FMS 100; FMS 200 . Students who have credit for ENG 447 or FMS 442 may not enroll in SLC 450
SLC	**461**	Feminist Political Writing in Contemporary Europe	Examines the discourse of gender-politics in Central Eastern Europe before and after Soviet hegemony.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**464**	Politics of Drama in 20th-Century Europe	Interdisciplinary examination of European drama before and after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**472**	Literature and Politics in Pre- and Post-Communist Europe	Interdisciplinary examination of the cultures of Eastern Europe from WWI to the present.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**476**	Literature and Film in 20th-Century Eastern Europe	Evaluates literary texts and films as a massive propaganda machine of the totalitarian state.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**479**	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**480**	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**481**	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**482**	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**483**	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**485**	Problems of Literary Translation	Theory and practice with emphasis on application through individual translation projects. May be repeated for a total of 6 semester hours.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 401 with D or better or currently enrolled
SLC	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Honors students only
SLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	**515**	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better
SLC	**525**	Second-Language Acquisition Trends and Issues in Foreign Language Teaching	Advanced methods seminar, designed for experienced teachers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SLC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**304**	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	CS	
SLV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**440**	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	
SLV	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLV	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLV	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
SOC	**220**	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**264**	Gender and Society	Sociological analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	(L or SB) & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
SOC	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		Pre-requisites: Must be an Honors student
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	Pre-requisites: minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Students who have credit for CDE 312 may not enroll in SOC 312
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**321**	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & H	
SOC	**331**	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G	
SOC	**333**	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G	
SOC	**334**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G & H	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**363**	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**375**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	(HU or SB) & C	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	CS	
SOC	**391**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	Prerequisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390. Credit is allowed for only FAS 361 or SOC 391
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**415**	The Family	Family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**416**	Marriage Problems in Contemporary Society	Marital and family problems in today's society from the viewpoint of personal and cultural adjustment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	
SOC	**417**	Family Violence	Current research and theories about domestic violence including child maltreatment, spousal aggression, and courtship violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & H	
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**424**	Women and Health	Women as healthcare workers and issues of health, illness, and healthcare for women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**427**	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**429**	Sociology of Law	Examines law as an institution; its origins, operations, and consequences. Emphasizes contemporary legal issues and problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**433**	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**446**	Sociology of Crime	Process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**448**	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G	
SOC	**451**	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & G	
SOC	**474**	African Americans in Modern Society	Social and cultural heritage of black Americans; achievements and current trends.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB & C	
SOC	**483**	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		
SOC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-6		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-3		
SOC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**501**	Practicum in Survey Research	Research practicum in survey fieldwork, analysis, and reporting in the Phoenix Area Study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**502**	Practicum in Survey Research	Continuation of SOC 501.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**503**	Academic Professional Development	Becoming and working as an academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**504**	Sociology as a Profession II	Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**505**	Applied Regression Analysis	Multiple linear regression topics relevant to sociological data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**507**	Social Statistics IIA: Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in sociology. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**508**	Social Statistics IIB: Structural Equation Analysis	Structural equation models using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**509**	Social Statistics IIC: Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**512**	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
SOC	**515**	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**516**	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
SOC	**519**	Graduate Medical Sociology	Current developments in medical sociology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
SOC	**523**	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
SOC	**533**	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		
SOC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**585**	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**588**	Methodological Issues in Sociology	Basic methodological issues in the study of human social life. Emphasizes a limited number of key issues and approaches to research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
SOC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		
SOC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social/Family Dynamics T	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social/Family Dynamics T	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**210**	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**328**	Migration	Introduces the definition and analysis of migration in all forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**341-W**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	
SOC	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
SOC	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
SOC	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**364**	Popular Culture	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

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SOC	**366**	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**400**	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**419**	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**443**	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**456**	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**457**	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SOS	**100**	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**111**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	(HU or SB) & G	
SOS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**320**	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	L or SB	Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**321**	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**322**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**323**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**324**	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better
SOS	**325**	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	**326**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	School of Sustainability	School of Sustainability	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SSH 414, may not enroll in SOS 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SOS	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in BIO 424 or ASM 424, may not enroll in SOS 424
SOS	**430**	Sustainable Economic Development and Social Transformation	A clustered learning network on the application of sustainability principles to the evaluation of economic development strategies at the national, regional, and local levels, using case studies. May be repeated once for credit.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**431**	Resilience and Sustainability	A clustered learning network on the application of resilience analysis to the evaluation and management of the sustainability of coupled social-ecological systems using case studies. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**433**	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**492**	Honors Directed Study		Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		
SOS	**493**	Honors Thesis		N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Pre-requisites: Must be an Honors student
SOS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**499**	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	**510**	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**511**	Quantitative Methods in Sustainability	Provides a sense of when, where, and how quantitative methods are used in studying questions related to sustainability; a road map for furthering quantitative skill sets; and opportunities to refresh and build some basic mathematical skills from selected topics in differential and integral calculus, linear algebra, and probability and statistics that will be required for further study.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**512**	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**513**	Science for Sustainability	Carbon cycle, nutrient cycles, carbon and nutrients in the oceans, climate change, oxygen and ozone, solid waste pollution, urban air pollution.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**515**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**516**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 516 if you have credit in GLG 547, or PAF 547, or BIO 515

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SOS	**530**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale. Credit is allowed for only SOS 530 or SOS 322.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**532**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:May not enroll in SOS 532, if credit received for ASB 533
SOS	**533**	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**534**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**535**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**536**	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Studentso choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**540**	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to enable them to understand and critique empirical research papers and to conduct their own basic quantitative analysis. Exposes students to applications of statistical methods in the literature to foster an understanding for how statistical and econometric tools are utilized in the research community and to develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations, and command of statistical tools that constitute quality empirical research. Class sessions primarily focus on the development of the necessary theoretical "toolbox"; practical skills in the use of a statistical software package and in interpreting its output are fostered through problem sets.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**550**	Introduction to Sustainability and Organizational Strategies	Focuses on organizational strategies for technology companies competing in a global environment. Strategic and tactical decision implications of a life cycle value proposition; modeling and analysis for strategic decisions about product/service bundles and delivery mechanisms; innovation; technology, including the linkages to the firm strategy and empirical evidence; supply, demand, and value chain; research of laws, guidelines and international agreements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**551**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 551 if you have credit in CEE 544
SOS	**552**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		

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SOS	**559**	Sustainable Technology and Management Capstone	Provides opportunity to demonstrate comprehension of the fundamental aspects that have been introduced in the classroom and the synthesis of these fundamental aspects into a demonstrable project that can be presented and defended.	N	STO	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SP	**431**	Prose of Golden Age		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Must be a freshmanwith 25 or less total earned hours
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412

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SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**203**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not enroll in SPA 203 if they have received a D or better in SPA201,202,204,311,312,313,314,315,316,325,412
SPA	**204**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 204 or SPA 202, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	May not enroll in SPA 313 if received a D or better in SPA 314,315, 316,325,412
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412
SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		May not enroll in SPA 316, if received a D or better in SPA 314, SPA 412; must have completed SPA 315 with a D or better or in progress
SPA	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: SPA 314 or 316
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**400**	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 413 with a D or better, or be co-enrolled in SPA 413
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**417**	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SPA 412 with a grade of D or better, or in progress
SPA	**418**	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 413 with C or better
SPA	**420**	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisites: SLC 400(or equivalent) with C or better; SPA 412
SPA	**421**	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or SB) & C	Pre-requisites: SPA 412 with C or better
SPA	**422**	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 412
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L & G	Pre-requisite: SPA 325

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**429**	Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuilxóchitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**431**	Prose of Golden Age		N	LEC	N	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**434**	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderón de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**435**	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**454**	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**456**	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**471**	Civilization of the Spanish Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & C	Pre-requisites: SPA 314 or 316
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**473**	Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & G	Pre-requisties:SPA 314 or 316 with a grade of D or better or currently enrolled
SPA	**474**	Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**485**	Mexican American Short Story	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325
SPA	**486**	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**487**	Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
SPA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**534**	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**536**	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**537**	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**538**	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**540**	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**541**	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**542**	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**543**	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**544**	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**545**	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**552**	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marín, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**555**	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**557**	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**560**	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**561**	Golden Age Spanish Prose Fiction	Major figures and works of the 16th and 17th centuries, with emphasis on the picaresque novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**562**	Golden Age Spanish Poetry	Major figures and works of the 16th and 17th centuries, with emphasis on lyric poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**563**	Spanish Romanticism	Principal figures and works of Spanish romanticism, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**564**	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**565**	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**566**	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**567**	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**568**	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**569**	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**570**	Indigenous Literatures of Spanish America	Indigenous literary traditions, with emphasis on Nahuatl, Mayan, and Quechua literatures through readings in Spanish translations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**571**	Colonial Spanish American Literature	Major figures and works from conquest to independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**572**	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**573**	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**574**	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**575**	Contemporary Spanish American Novel	Principal novels of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**576**	Contemporary Spanish American Short Story	Principal short stories of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**577**	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**578**	Novel of the Mexican Revolution	Representative works and authors of this genre (Guzmán, Azuela, Urquizo, Muñoz, and Romero), including related or peripheral offshoots in indigenous novels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**581**	Latin American Popular Culture	Studies in selected topics of Latin American popular culture, with emphasis on appropriate academic models for the critical analysis of these materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**582**	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**585**	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlica, Suárez, Ulibarrí, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**586**	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**587**	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory an other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**588**	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**589**	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**601**	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**791**	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.	G	
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: Must have completed SPA 202 with a grade of C or greater.
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better

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SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L & G	Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better

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SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPE	**316**	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
SPE	**511**	The Exceptional Child	Educational needs of exceptional children and adults. Not recommended for students who have completed SPE 311.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**512**	Individuals with Mental Retardation	Etiology, diagnosis, and management of individuals with mental retardation. Current trends in prevention, programming, and teacher preparation. Not recommended for students who have completed SPE 312.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**514**	Bilingual/Multicultural Aspects of Special Education	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**519**	Inclusion Methods: Science, Social Studies, and Mathematics	Instructional strategies used for delivery of science, social studies, and mathematics with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	DIS	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**521**	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**524**	Effective Classroom Behavior Management	Organization and delivery of instruction including formative evaluation and techniques of academic behavior management for exceptional children. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**525**	Social Behavior Interventions	Analysis and intervention into social behavior problems of exceptional students. Focuses on strategies to change maladaptive social behavior. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**531**	Methods of Applied Behavior Analysis for Exceptional Populations	Behavior management approaches for classroom behavior of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**536**	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**537**	Instructional Management: Reading and Language Arts	Instructional strategies used for delivery of reading and language arts with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPE	**548**	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**550**	Inclusion Practices in Science and Mathematics	Facilitates and expands knowledge in the practical application of strategies meeting diverse needs of learners in science and mathematics classrooms	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**551**	Teaching Young Children with Special Needs	Methods, materials, and curriculum for preschool and primary-aged children with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**553**	Developmental/Functional Assessment	Teacher-focused developmental/functional assessment of preschool and severely, physically, and multiply handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	The Parent/School Partnership	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**561**	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**566**	Applied Behavior Analysis in Inclusive Settings	Definitions, characteristics, assumptions, and basic principles of behavioral analysis as applied to social skills in inclusion settings.	N	DIS	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**574**	Educational Evaluation of Exceptional Children	Design and statistical considerations of normative and criterion-referenced tests. Collection, recording, and analysis of data from formative evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**575**	Survey and Current Issues for Children with Special Needs	Mainstreaming, noncategorical, financing, legal diagnostic, labeling, legislative, and other critical and controversial issues related to the education of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**577**	Inclusive Teaching and Learning	Develops successful learning environments for students using evidence-based instructional approaches, collaborative teaching models, and culturally responsive practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only

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SPE	**582**	Research and Evaluation in Special Education	Introduces interpreting research. Specific research techniques with primary emphasis on classroom research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**585**	Creativity: Research and Development	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**586**	Advising the Gifted Child	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**587**	Controversies in Educating the Gifted	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**588**	The Gifted Child	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**589**	Methods in Teaching the Gifted	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be graduatie student in Special Education
SPE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be a graduate student in Special Education
SPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisites: Graduate students only
SPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be a graduate student in Special Education
SPE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Must be a graduate student in Special Education
SPE	**702**	Conducting Research with Special Populations	Considers concepts and methodologies for conducting research with any aspect of special education, including gifted and multicultural.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate students only
SPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate students only
SPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Must be Graduate(doctoral) student in Special Education
SPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite:Must be a graduate student (doctoral) in Special Education
SPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be a grad(doctoral) student in Special Education
SPE	**532**	Systems, Policies, and Program Practices	Analyzes historical, political, social, and legal factors impacting special education services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**533**	Issues and Foundations in Special Education	Foundational themes and issues in special education. Critical issues related to characteristics of students with mild emotional disturbance, behavior disorders, learning disabilities, mental retardation, orthopedic, and other health impairments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**534**	Assessment and Evaluation for Children with Special Needs	Discusses assessment practices related to student eligibility and program planning. Emphasizes authentic, individualized, interdisciplinary practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**535**	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**540**	Family Centered Practices	Issues associated with families and family systems. Effects of disabilities on families. Strategies for family support and empowerment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**541**	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**544**	Assessment and Evaluation of Infants and Young Children	Developmental assessment and related program planning for infants and young children. Emphasizes authentic, individualized, family-centered and culturally competent approaches.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children with diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SPE	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**555**	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**578**	Student Teaching in Special Education	Y grade only. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**579**	Apprentice Teaching in Special Education	Apprentice teaching in special education setting. Must be taken four times for a total of 12 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**222**	Orientation to Education of Exceptional Children	Includes gifted, mildly handicapped, severely handicapped, and the bilingual/multicultural exceptional child.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB & C	
SPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SPE	**310**	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**312**	Mental Retardation	Characteristics and assessment specific to mental retardation. Emphasizes terminology, development, educational programming, and therapeutic procedures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**314**	Introduction to Bilingual/Multicultural Special Education	Theoretical background and practical application of general issues regarding the education of bilingual/multicultural handicapped children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**317**	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**318**	Family-School Collaboration	Explores relationships between families of children with special needs and professionals in educational institutions and community agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**320**	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**322**	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**336**	Behavioral and Emotional Problems in Children	Characteristics and assessment specific to emotionally and behaviorally disturbed children. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**361**	Introduction to Learning Disabilities	Characteristics and assessment specific to learning disabilities. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**396**	Field Experience I	Applies course content while working with students with disabilities in inclusive settings. Emphasizes classroom and behavior management. Fee.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**397**	Field Experience II	Applies course content in a special education setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**411**	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**412**	Evaluating Exceptional Children	Normative and criterion-referenced diagnostic techniques, including formative evaluation. Emphasizes application. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**413**	Methods in Language, Reading, and Mathematics for Exceptional Children	Methods, techniques, and materials for use in prescriptive teaching. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**414**	Instructional Management and Strategies: Reading and Writing	Organization and delivery of instruction, including formative evaluation techniques. Instructional techniques of reading and writing. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**415**	Classroom and Behavior Management	Analysis and intervention into social behavior problems of exceptional populations. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**416**	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators. May be repeated for credit.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**417**	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**419**	Instruction in Content Areas: Science and Social Studies	Develops and implements instructional methods and learning strategies for students with special needs related to science and social studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**423**	Technology & Instructional Methods in Language, Reading, & Mathematics for Special Needs students	Technology and instructional methods in language, reading, and mathematics for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**424**	Methods of Cross-Categorical Special Education	Assessment and instructional methods for students with mild to moderate retardation, learning disability, emotional disabilities, and physical/health impairment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**431**	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**440**	Professional Seminar in Special Education	Examines critical issues in the delivery of special education services. Emphasizes self reflection and professional development.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Student teaching in special education setting.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Y grade only. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		
SPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Must be an Honors student
SPE	**493**	Honors Thesis		N	THE	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**496**	Field Experience III	Applies course content in a special education setting. Emphasizes observation pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**576**	Field Experience	Applies course content in special education classrooms: observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Prerequisite(s): Valid copy of AZ DPS fingerprint card on file at ASU; MEd in Special Education major
SPF	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**301**	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L	Pre-requisites: completion of first year composition
SPF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**401**	Teachers and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		

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SPF	**402**	Teachers and the Law in Indigenous Communities	Examines the legal rights of students, teachers, and the district while preventing injury to students in indigenous communities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
SPF	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
SPF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
SPF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**501**	Culture and Schooling	Introduces social science concepts of culture and the cultural milieu in which schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**510**	Intro to Organization and Administration of American Public Schools	Curricular practices used in inclusion classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**511**	School and Society	Interrelationship of school and society and the role of education in social change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**515**	Gender and Education	Methods and materials for remediating the basic academic problems of exceptional children. Prerequisite: admission to MEd in Special Education program.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**520**	Cultural Diversity in Education	Philosophic and sociological investigation of cultural diversity in the United States and how it relates to education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**530**	Sociology of Education	Current issues in the sociology of education: stratification, social mobility.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**534**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 534 or 634.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**544**	Philosophical Foundations of Education	Theories of education in ancient, medieval, and modern classical and contemporary philosophies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**597**	Teacher and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science and the law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**603**	Visual Ethnography in Education	Advanced qualitative methods class combining ethnography with the use of video and still photography in data gathering and presentation.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**612**	Evaluation Theory	Explores the major theories of evaluation (inquiry leading to value judgments) in educational policy through examination of cases.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**622**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**634**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 634 or 534.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		
SPF	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**711**	Social and Historical Foundations of Education	Explores the history of sociological thought, especially theories of the relations between educational systems and the social/cultural world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
SSH	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111. Students who have credit for ASB 200, may not enroll in SSH 200
SSH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better or currently enrolled. If you have credit in ASB 301, you may not enroll in SSH 301
SSH	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: Students who have credit for ASB 355, may not enroll in SSH 355
SSH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**400**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	Pre-requisites: ASB 100 (or SSH 100) or ASB 102 with D or better
SSH	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 or ASM 104 with D or better or currently enrolled; SSH 100 with D or better or currently enrolled
SSH	**402**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better or currently enrolled. If you have credit in ASB 452, you may not sign up for SSH 402
SSH	**403**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for ASB 443, you may not enroll in SSH 403
SSH	**404**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
SSH	**405**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
SSH	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SOS 414, may not enroll in SSH 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SSH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**493**	Honors Thesis		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: SSH 510 or ASB 510 completed with D or better or currently enrolled
SSH	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511 with D or better. Must be graduate student
SSH	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 500 completed with D or better or currently enrolled; SSH 511 or ASB 511 completed with D or better or currently enrolled
SSH	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
SSH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
STM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
STM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
STP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**231**	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Prerequisites: MAT 117 or 142 with C or better
STP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 210 or 251 or 265 or 270 with C or better
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**425**	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	**427**	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: STP 421 with C or better
STP	**429**	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: STP 420 with C or better
STP	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
STP	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	**525**	Advanced Probability	Measure-theoretic foundations of probability, distribution functions and characteristic functions, laws of large numbers and central limit theorems, conditional probabilities, martingales, and topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**526**	Theory of Statistical Linear Models	Multinormal distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**527**	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**530**	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**531**	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**532**	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**533**	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**534**	Applied Discrete Data Analysis	Models for discrete and count data, measures of association, and log-linear and regression models for contingency tables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**535**	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**300**	Introduction to Probability	Probability models and computations, joint and conditional distributions, moments, families of distribution, stochastic processes, simulation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT210 with a grade of C or greater or be currently enrolled.
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
STP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STS	**101**	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**110**	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**301**	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**302**	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: ENG 101, ENG 105, ENG 107 or ENG 111 with C or better
STS	**303**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
STS	**304**	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**305**	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**306**	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**317**	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**318**	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**325**	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**328**	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STS	**329**	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**330**	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**331**	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**332**	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**364**	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites:STS 101 and STS 301 with a grade of D or better
STS	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**401**	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:Completed STS 301 with a grade of D or better
STS	**425**	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
STS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
STS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SWG	**501**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**502**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**503**	Development of Families in Oppressive Context	Addresses the development of healthy families and children. Explores essential tasks of human development and theories that inform practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be admitted to MSW.
SWG	**504**	Theories of Human Behavior	Addresses development of healthy adults and human behavior in groups, organizations, and communities.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; SWG 503 with a C or better or currently enrolled
SWG	**510**	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	**511**	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better
SWG	**512**	Values and Ethics of Social Work Practice I	Develops a basic understanding of diverse ethical systems and their application to a broad range of human problems in various social and cultural contexts.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student
SWG	**513**	Social Work Generalist Practice II	Building on SWG 512, continues to develop and apply a generalist framework of social work practice. Examines theories of practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be admitted to the MSW and have completed SWG 512 with a grade of C or greater

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SWG	**519**	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**520**	Research and Advocacy	Develops knowledge and skills needed to utilize and engage in social research related to advocacy issues and the evaluation of social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**531**	Social Policy and Services I	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral of Social Work student
SWG	**532**	Policy and Social Change	Overview of the history, development, pertinent concepts, skills, and definitions associated with social welfare problems and policies.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**533**	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student.
SWG	**534**	Diversity and Underserved Populations	Examines issues of privilege and oppression, including their impact on the social work process, with the goal of developing a culturally competent master's-level social worker.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**540**	The Professional Experience I	150 clock hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; Co-requisite: SWG 512
SWG	**541**	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Master or Doctor Social Work student; Pre or Co-requisite: SWG 510 with a grade of C or greater if completed
SWG	**542**	Field Practicum II	See SWG 541. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG510, SWG541, and SWG 511 with a C or greater or be currently enrolled (or be enrolling in SWG511)
SWG	**543**	The Professional Experience II	250 hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: Master of Social Work student; SWG 512 with C or better; Co-requisite: SWG 513
SWG	**550**	Co-Occurring Disorders	Provides sound theoretical and practical orientations to working with persons who have co-occurring disorders.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**551**	Crisis Intervention	Covers the basics of crisis intervention in social work practice, along with applications to several different populations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**552**	Issues in School Social Work	Provides knowledge and skills necessary to implement effective social work services in a school setting.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**553**	Social Work with American Indians	Introduces social work issues relevant to Native Americans. Explores effective methods with Native American clients.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**554**	Substance Abuse	Psychological and sociocultural determinants of substance abuse. Overview of social policies and treatment approaches.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**555**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWG 555 or SWU 455.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**557**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 557 or SWG 457.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student
SWG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**585**	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student
SWG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisite: Master or Doctor Social Work student.

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SWG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-12		
SWG	**600**	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	**603**	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 502; SWG 511; SWG 542
SWG	**604**	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 603
SWG	**606**	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 502 with C or better
SWG	**608**	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 502; SWG 511; SWG 542
SWG	**609**	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 608 compeleted with D or better or currently enrolled
SWG	**610**	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW or MSW Adv Standing student; Co-Requisite: SWG 693 and 645
SWG	**611**	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	College of Public Programs	School of Social Work	2-3		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 510 completed with C or better; SWG 511 completed with C or better or currently enrolled; SWG 541 and SWG 542 completed with Y or currently enrolled
SWG	**612**	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**613**	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 603
SWG	**614**	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600- level SWG courses.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**615**	Effective Intervention with Children and Adolescents	Provides a framework of knowledge, theories, and skills for effective social work practice with vulnerable children and adolescents.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing
SWG	**616**	Social Work with Chemically Dependent Families	Examines dynamics of the chemically dependent family and presents clinical approaches for intervening in the family system and subsystems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**617**	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**618**	Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**619**	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG519 with a grade of C or greater or be currently enrolled
SWG	**621**	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 611 completed with a C or better or currently enrolled; SWG 641 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or better if completed
SWG	**623**	Agency and Community-Based Research in Social Work	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Soc Wrk student; SWG 519 or 520 completed with C or greater or currently enrolled; Pre or Co-requisite: SWG 680 with C or greater if completed, or currently enrolled.
SWG	**626**	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing; AND completed SWG 610 with a C or greater
SWG	**630**	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**631**	Advanced Policy Analysis	Supports advanced generalist practice with emphasis on policy analysis and philosophy and politics of resource allocation and social welfare.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either: MSW or MSW Adv Standing
SWG	**632**	Social Policy and Services II	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG531 with a grade of C or greater or be currently enrolled
SWG	**633**	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 542 completed with a Y or currently enrolled

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SWG	**641**	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal. fee	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or better or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 611 (with a C or better if completed)
SWG	**642**	Advanced Practicum: Direct Practice II	See SWG 641. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work; SWG 511 & SWG 611 with a C or greater or be currently enrolled; SWG 542 & SWG 641with a Y or be currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or greater if completed
SWG	**643**	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or greater or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 681 or SWG 682 with a C or greater if completed
SWG	**644**	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 511 with C or bettter; SWG 542/643 with a Y grade; SWG 681 or 682 with a C or better; Pre/Co-requisite:SWG 680 with C or better
SWG	**645**	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student; SWG 542 with a grade of Y OR MSW Advanced Standing student; co-enrolled in SWG 610 and SWG 693
SWG	**646**	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either the Standard MSW or MSW Adv Standing; completed SWG 645 with a grade of Y; AND be co-enrolled in SWG 614, and SWG 693
SWG	**650**	Social Work Ethics/Law		N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**653**	Introduction to Holistic Therapies	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**653**	Theory and Practice of Family Therapy	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either: MSW or MSW Adv Standing.
SWG	**654**	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**655**	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**656**	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be a graduate student
SWG	**657**	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Aryuvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**660**	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 681 or SWG 682 completed with a C or greater or currently enrolled; Pre or Co-requisite: SWG 623 with C or greater if completed
SWG	**681**	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**682**	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**685**	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requistes: SWG 681, 682; Co requisite, SWG 523
SWG	**686**	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisites:Must be a student in either: MSW or MSW Adv Standing
SWG	**697**	Special Topics in Working with Diverse Groups	Provides practice strategies for clients of specific marginalized groups; addresses access to resources; describes the larger political context and policy issues that impact the particular group.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	3.		
SWG	**700**	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**720**	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		
SWG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	**171**	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & H	
SWU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**250**	Stress Management Tools	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	
SWU	**291**	Social Service Delivery Systems	Introduces federal and state social service delivery systems as well as private social service agencies. Explores purpose and structure of community resources. During the semester, students must complete 40 hours of service learning in a social agency.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 with a D or better or currently enrolled; Pre or Co-requisites: SWU 171 or SWU 271 (with a C or better if completed)
SWU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**295**	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & C	Pre-requisites: PGS 101, SOC 101 or SOC 301 with D or better; Pre or Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	**302**	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for creditd.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**303**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	L or SB	Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 completed with a D or greater or currently enrolled; Pre or Co-requisites: SWU 171, SWU 291 and SWU 295 (with a C or better if completed)
SWU	**310**	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)

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SWU	**320**	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: student must have completed SWU310 with a grade of C or greater or be currently enrolled or enrolling during the same term
SWU	**321**	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	**331**	Social Policy and Services I	History, philosophy, and values of social welfare; function and role of social welfare in society; development of the social work profession and practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	H	Pre-requisites: must be a Social Work student and have completed the following with a C or greater or be currently enrolled: ECN 111 or 211, POL 110 or POL 310 or POS 110 or POS 310, SWU 171 or SWU 271, and SWU 291.
SWU	**332**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: student must have completed SWU310 with a grade of C or greater or be currently enrolled/enrolling AND must have completed ECN111 with a grade of D or greater or be currently enrolled
SWU	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**340**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 (SWU 301) with C or better; Pre or Co-requisite: SWU 310 (with C or better if completed)
SWU	**374**	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre/Co-requisite: SWU 310 with C or better if completed
SWU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	**402**	Human Behavior in the Social Environment II	Sequel completing study of life span development and behavior which forms base for social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 with C or better
SWU	**410**	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work undergraduate; SWU310 with C or better; PHI 101, 105 or 306 with D or better; Co-requisites: SWU 412 and SWU 413
SWU	**411**	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU414 and SWU415 AND must be a Social Work major or must have completed SWU410, SWU412, or SWU413 with a grade of C or greater or be currently enrolled
SWU	**412**	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only. fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU413; must have completed SWU310 with C or better; Must be a Social Work major
SWU	**413**	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU412; must have completed SWU 310 with C or better; Must be a Social Work major
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: must be co-enrolled in SWU 411and 415, and completed SWU 410 and SWU 413 with a grade of C or greater or be currently enrolled.
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only. fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	**415**	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	**415**	Field Instruction Seminar II	Field-focused seminar, including practice evaluation. 1.5 hours a week.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1.		Pre-requisites: must be co-enrolled in SWU 411 and 414, and have completed the following with a grade of C or greater or be currently enrolled: SWU 410, SWU 412, and SWU 413.
SWU	**420**	Practice-Oriented Research	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**432**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 310 with C or better; ECN 111 or ECN 211 with D or better; POS 110 or 310 with D or better; Co-requisites: SWU 410, SWU 412, and SWU 413
SWU	**442**	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**444**	Issues in School Social Work	Demonstrates how community, family, and school are interdependent using an ecological metaphor, and introduces school social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**455**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWU 455 or SWG 555.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**457**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 457 or SWG 557.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**474**	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre-requisite: must have completed SWU 310 with a grade of C or greater or be currently enrolled
SWU	**492**	Honors Directed Study		N	RSC	N	OPT	College of Public Programs	School of Social Work	1-6		

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SWU	**493**	Honors Thesis		N	IND	N	Z1	College of Public Programs	School of Social Work	1-6	L	Pre-requisite: must be an honor student
SWU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-7		
SWU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TA	**488**	Elem Air Transport		Y	LEC	Y	CNV	Ira A. Fulton Engineering	INACTIVE - Dept Aeronautical Management Technology	3.		
TCL	**101**	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	
TCL	**111**	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
TCL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-3		
TCL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-4		
TCL	**201**	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**202**	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & C	
TCL	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
TCL	**211**	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**220**	Transborder Chicano/a and Latino/a Cultural Expression	Interrelation among economic, social, and political status and forms of artistic expression; i.e., music, dance, drama, literature, and graphic arts.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-4		
TCL	**303**	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**304**	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**305**	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	FLD	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		Pre or Co-requisites: TCL 303 and TCL 304 with a D or better if completed
TCL	**310**	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	
TCL	**314**	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	(L or SB) & H & C	
TCL	**315**	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB	
TCL	**321**	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**323**	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	4.	SB & C	
TCL	**326**	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better

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TCL	**327**	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**328**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	
TCL	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & H & C	
TCL	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & H & C	
TCL	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
TCL	**340**	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	L & C	
TCL	**341**	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
TCL	**342**	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & C	
TCL	**350**	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C & G	
TCL	**351**	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	
TCL	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
TCL	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for ENG 363, you may not enroll in TCL 363. Completed ENG 101, or ENG 107, or ENG 105 with a D or better or be currently enrolled
TCL	**364**	Transborder Chicana/o and Mexican Literature of Southwest North America Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	L & C	Pre-requisites: SPA 314 or 316 with C or better
TCL	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU	
TCL	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
TCL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-4		
TCL	**410**	Race, Medicine, and the Body	The ways in which medicine, disease, and health outcomes are affected by culture, gender, and social location.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	L	
TCL	**422**	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		Pre-requisites: TCL 321 with C or better
TCL	**424**	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB	Pre-requisites: TCL 321 with C or better
TCL	**443**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & G	
TCL	**444**	The Ethnography of Mexican Border Rural Settings	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	SB & G	
TCL	**445**	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Uses a transregional and transborder approach, focusing on the interconnections of this modern genre across the borders of Spanish América. Takes a long historical view of the genre by reading representative stories of important literary movements and the aesthetic and cultural values they promoted and fostered.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	L or HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	**446**	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic ¿minority¿ groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or ¿nuyoricans¿)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	(L or HU) & C	
TCL	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
TCL	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU & C	Pre-requisites: ENG 102, 105, or ENG 108 with a grade of C or better. May not enroll in TCL 465 if received credit for FMS 465
TCL	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	C	
TCL	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	HU	Pre-requisites: ENG 102, 105 or 108 completed with a C or better; You may not enroll in TCL 470 if you have credit for FMS 470
TCL	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.		
TCL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-12		
TCL	**485**	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	(L or HU) & C	
TCL	**488**	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples¿ experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	3.	L & C	
TCL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-6		
TCL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-6	L	Pre-requisites: Must be an Honors student
TCL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-4		
TCL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-7		
TCL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-3		
TCL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dept of Transborder Chicana/o & Latina/o Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TDM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
TDM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**205**	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 with C or better if completed; Credit is allowed for only NLM, TDM or PRM 210
TDM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: PRM 120 or NLM 160) with C or better if completed; Credit is allowed for only NLM, PRM or TDM 301
TDM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre-or Co-requisites: PRM 120 (or REC 120) with a C or better if completed
TDM	**325**	Tourism Accommodations	Local, national, and international overview of the lodging and food service industries.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: RTM 373 or TDM 205 with C or better
TDM	**345**	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**350**	Tourism Marketing	Critical examination of marketing principles; applications to travel, tourism, and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better; Minimum 45 hours
TDM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**372**	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	**386**	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**401**	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Prerequisite: TDM 210 or PRM 210 with C or better; and TDM 301 or PRM 301 with C or better; and PRM 303 or TDM 372 with a C or better. Students who have credit for PRM 401, may not enroll in TDM 401
TDM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better. Students who have credit for PRM 402, or NLM 402, may not enroll in TDM 402
TDM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303 or TDM 372 with C or better Students who have credit for NLM 403 or PRM 403, may not enroll in TDM 403
TDM	**415**	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**448**	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or REC 120 with a C or better or be currently enrolled
TDM	**458**	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Prerequisites: TDM 402 (or REC 482) and TDM 403 (or REC 499 Pre Internship Workshop) with a C or better or currently enrolled; Must be a Tourism Development and Management or Recreation (Tourism concentration) student
TDM	**480**	Nature-Based Tourism	Examines the interaction of tourism with culture, natural environment, as well as the impacts of tourism on the environment.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or TDM 205 with a D or better, or RTM 373 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
TDM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
TDM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
TDM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
TEL	**501**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**683**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
TEL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**702**	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**703**	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**711**	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**712**	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action researc, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**713**	Applied Mixed Methods of Inquiry	Data collection, analysis, interpretation in studies combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**795**	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**111**	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
TEL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**212**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
TEL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**311**	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**313**	Educational Technology in the K-12 Curriculum	Applies and integrates educational technologies in all curricular areas; examines theoretical and practical issues for diverse learners. Fee.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**314**	Classroom Assessment	Assessment and evaluation of student leaning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	**315**	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L or SB	
TEL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
TEL	**492**	Honors Directed Study		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**493**	Honors Thesis		Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
THA	**101**	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
THA	**102**	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:THA 101 with a grade of C or better
THA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**201**	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 102 with C or better
THA	**202**	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 201 with a grade of C or better or currently enrolled
THA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THE	**307**	Acting:		N	LEC	N	CNV	Herberger College of the Arts	School of Theatre and Film	3.		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	**125**	Orientation to Theatre and Film	Orientation to university and school resources and procedures. Career planning and guidance. Community-building exercises. Attendance and written response to performance and media events. Required for BA Theatre and BA Film (film and media production concentration) majors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Theatre and Film students only
THE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**220**	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	L or HU	Pre-requisites: Herberger Institute students in specific majors; THE 125 with B- or better; ENG 101, ENG 105 or ENG 107 with C or better
THE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**301**	Film: the Creative Process II	Advanced study of contemporary cinema history and film techniques; analyzes social changes in film, multicultural filmmaking, and the star system.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed FMP201or THE300 with a D or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**320**	History of the Theatre I	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites:Must have completed THE220 with a C or greater or be currently enrolled
THE	**321**	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must have completed THE220 and THE320 with a C or greater or be currently enrolled
THE	**322**	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must NOT be a Theatre student
THE	**325**	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Must be a Theatre student
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**403**	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**404**	Foreign Films and Filmmakers	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	G	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**405**	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors. May be repeated for credit when topics vary. Fee (hybrid/Internet).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**406**	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & C	Prerequistes: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**421**	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Pre-requisites:ENG 102(or Eng 105, or 108) with a grade of D or better, or currently enrolled
THE	**422**	Latina and Latino Theatre	Readings, discussion, video of dramatic literature and production styles of Latina and Latino playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with a C or greater or currently enrolled OR Theatre Masters students
THE	**423**	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prequisites: Must be a Masters student , or must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled
THE	**424**	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**426**	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prequisites: Must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled OR be a Masters Theatre student
THE	**430**	History of Costume: Western Tradition	Studies major costume styles throughout history of Western civilization and how these fashions reflected society. Explores how styles can be used by theatrical costumers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**440**	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre undergraduate student; THE 220 and THE 320 with C or better
THE	**480**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Junior standing and above. Students who have credit for THE 581, may not enroll in THE 480
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		Pre-requisites: Must be a Fine Arts student; Must be an Honors student
THE	**493**	Honors Thesis		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be a Fine Arts student ; Must be an Honors student
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**504**	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**505**	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**510**	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**520**	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**524**	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**525**	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THE524 with a B or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**562**	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THP560 with a B or better
THE	**581**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis. Credit is allowed for only THE 581 or 480.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be a graduate student. Students who have credit for THE 480, may not enroll in THE 581
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Graduate student
THE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art Theatre student
THE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
THE	**201**	Film:Creat Procss I	Elements of the theatrical film: cinematography, sound, editing, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**320-W**	History of the Theatre	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**321**	History of Theatre	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**420**	History of the American Theatre	History of the plays, artists, and events in the development of American theatre from colonial to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
THE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**101**	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must NOT be a Theatre student
THP	**102**	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student
THP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**201**	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THP	**202**	Acting II: Realism	Rehearsal techniques and application of action to dramatic text. Emphasizes realistic drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Completed THP101 or THP102 with a B or better; Completed THE 220 with a C or better or be co-enrolled in THE 220
THP	**213**	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**214**	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**218**	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Fine Arts Theatre student; THE 220 AND THP 102 with a C or greater .

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**251**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**260**	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed ENG101,105 OR 107 with a C or greater or be currently enrolled
THP	**261**	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 101, 105 or 107 with C or better
THP	**272**	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**277**	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**301**	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**302**	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 101 (or THP 102), THP 202, THP 272, THP 277 and THE 220 with C or better
THP	**307**	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites:Must have completed THP101 or THP102 with a C or greater or be currently enrolled.
THP	**311**	Improvisation with Youth	Basic materials, techniques, and theories for facilitating improvisational drama with children and youth. Not open to freshmen.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman student
THP	**312**	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman or Sophomore student
THP	**313**	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**317**	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student; Corequisite: THP301
THP	**318**	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP218 AND THP213 or THP214 with a C or greater or be currently enrolled
THP	**320**	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**322**	Acting: Voice-Overs and Radio Drama	Applies effective vocal techniques to commercials, books on tape, radio dramas. Preparation of audition tape, performance in radio drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**331**	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP214 with a C or greater or be currently enrolled.
THP	**340**	Scene Design	Studio projects in designing scenery for contemporary stages. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP 213 with a grade of C or greater and THE 220 with a grade of C or greater or be currently enrolled.
THP	**345**	Lighting Design	Principles and theory of stage lighting design, including design process and execution, equipment, and light plots. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Sophomore standing or above
THP	**350**	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a BA Theatre major OR a Fine Arts BFA student
THP	**360**	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:Must have completed ENG210 or THP260 with a C or better, or be co-enrolled in THP 260
THP	**361**	Intermediate Screenwriting	Character and dialogue development, choosing correct structure, importance of subplots, developing a story into a completed thirty-page screenplay.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 261 with D or better or currently enrolled
THP	**372**	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP272 with a B or greater or be currently enrolled; must be junior academic level or higher
THP	**377**	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**378**	Acting: Stage Dialects	Major dialects needed for actors; techniques for researching and learning dialects; phonetic analysis of dialects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP377 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**385**	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled
THP	**386**	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP 101 or THP 102 with a B or greater or be currently enrolled
THP	**387**	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP101 or THP102 with a B or greater or be currently enrolled OR must be a Film and Media Production student.
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**401**	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites: THP 301 with a C or better, or Master of Arts or Master of Fine Arts student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**406**	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 completed with a C or better
THP	**411**	Methods of Teaching Drama	Applies materials, techniques, and theories with grades K-8 youth. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Graduate student OR must have completed THP311 with a C or greater or be currently enrolled
THP	**418**	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 318 with a C or greater or be currently enrolled OR Herberger Master of Art or Master of Fine Arts students
THP	**428**	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	**430**	Costume Design	Principles of costume design with projects in both modern and period styles. Includes budgets and fabric/pattern estimates.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must be a Theatre Scenography or Performance Design student OR must have completed THP214 with a C or greater or be currently enrolled
THP	**431**	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP214 AND THP331with a C or greater or be currently enrolled in both OR must be a Theatre Scenography or Performance Design student
THP	**435**	Advanced Technical Theatre	Selection of materials, drafting of working drawings, tool operation, and construction techniques.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 AND THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**440**	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**441**	Scene Painting	Studio projects in painting stage scenery. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**442**	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**444**	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP213 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**445**	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student AND have completed THP444 with a B or greater or be currently enrolled
THP	**450**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**451**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:THP 450 with a grade of D or better, or co-enrolled
THP	**460**	Advanced Playwriting	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage, culminating in a full-length script.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Fine Arts BFA student; Must have completed THP360 with a C or greater or be currently enrolled
THP	**461**	Scripts in Progress	Studio work with the instructor, centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP460 with a C or greater or be currently enrolled
THP	**481**	Secondary School Play Production	Methods of directing, designing, and coordinating play production experiences at the secondary school level.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**482**	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prerequisite:Must be a sophmore academic level or higher
THP	**483**	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP 202 with C or better or currently enrolled; Junior academic level or higher OR Master of Fine Arts student
THP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites:Must be a Theatre or Film student
THP	**489**	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP 101 or THP 102 and THE 220 with a B or greater; Junior academic level or higher
THP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
THP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		Prerequisites: Must be a Theatre student
THP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**501**	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**502**	Graduate Acting	Understanding and analyzing scripts and performance in order to be an effective actor/storyteller who speaks as a character. Projects focus on solo, duet performances. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**503**	Performance: the Ensemble	Ensemble, working with a playwright, creates a play that addresses social issues through improvisation and community input.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Masters of Art or a Masters of Fine Art Theatre student
THP	**504**	Acting: Styles	Fundamentals including combat, scansion, poetic language, acting style. Scene study, ensemble performance projects focused on Shakespeare, new scripts. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Pre-requisites: THP 503 with a D or better
THP	**505**	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisites: Master of Fine Art Theatre student
THP	**506**	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	**507**	Acting: Advanced Research and Performance	Acting in advanced theatre projects, productions, or collaborative performance in directing classes.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**509**	Singing for Actors	Introduces the basics of singing technique. Breath control, resonance, articulation, exploration, and expansion of singing range.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**511**	Methods of Teaching Drama	Applies dramatic materials, techniques, and theories with grades K-8 youth. Regular participation with children. Credit is allowed for only THP 511 or 411.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**512**	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Graduate student
THP	**514**	Projects in Community-Based Drama	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**518**	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**519**	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**520**	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**521**	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**522**	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**523**	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**524**	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**525**	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**526**	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**527**	Design II: Conceptualization and Collaboration	Readings and research in stage management and participation as a stage manager in a university theatre production	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**528**	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**529**	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**530**	Advanced Costume Design	Advanced studio projects in costume design for a variety of production forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Arts Theatre student
THP	**540**	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	**545**	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts Theatre student
THP	**555**	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**556**	Performance Technology		N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**560**	Playwright's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art Theatre student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**561**	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**582**	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Fine Arts Theatre student
THP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Theatre Master student
THP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisites: Fine Arts Graduate student
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Fine Arts Graduate student
THP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student
THP	**611**	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**618**	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**649**	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

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THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
TMC	**233**	Desktop Publishing and Infographics	Introduces software and hardware used for desktop publishing and infographics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**331**	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre- or Co-requisites: TMC 346; ABS 350, APM 301, QBA 221, STP 420 or OMT 401
TMC	**346**	Management Dynamics	Management challenges and the leadership skills needed to achieve organizational objectives in the changing industrial and technical environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**396**	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Prerequisites:Must be at least a Junior AND be a Tech Sci BAS or BS student.
TMC	**470**	Project Management	Introduces techniques for managing small groups within larger organizations, including team building, motivating, planning, tracking activities, and computer tools.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Technology & Innovation BAS student OR IMC 346, IST 346, MGT 301 or TMC 346 with D or better and APM 301 or STP 420 with D or better. If you have credit for OMT 570, you may not enroll in TMC 470.
TMC	**480**	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		Prerequisites:Must be a Tech Sci/Engr: NonDegree or BAS or BS or MS or MS Tech Plan AND have a 2.25 GPA or better.
TMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		Prerequisites: Must be a Tech Sci: BAS or BS AND have 3.00 GPA or better.
TMC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre Requisites: Graduate or Non Degree Students Only
TMC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	**200**	Impact of Communications Technology on Society	Organizational issues and development of technical communication. Activities include research, evaluations, and presentation of oral arguments in support of positions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Must have earned C or better in ENG 102, 105, or 108 or be currently enrolled
TWC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**301**	General Principles of Multimedia Writing	Introduces writing in a variety of media, understanding the consequences of integrating media, and effective editing techniques.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**347**	Written Communication for Managers	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**400**	Technical Communications	Planning and preparing technical publications and oral presentations based on directed library research related to current technical topics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: College of Technology and Innovation BS or BSE student; senior academic level; 2.25 minimum cumulative GPA; ENG 102, 105 or 108 with C or better
TWC	**401**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 501, you may not enroll in TWC 401
TWC	**403**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**411**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Students who have credit for TWC 511, may not enroll for TWC 411
TWC	**421**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: If you have credit for TWC 521, you may not enroll in TWC 421
TWC	**431**	Principles of Technical Editing	Basic principles of technical editing (for print and electronic media) including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:May not enroll in TWC 431, if credit received in TWC 531
TWC	**443**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:If you have taken TWC 543, you may not enroll in TWC 443
TWC	**444**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 544, you may not enroll in TWC 444
TWC	**445**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you received credit for TWC 545, you may not enroll in TWC 445
TWC	**446**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 546, you may not enroll in TWC 446
TWC	**451**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment. Credit is allowed for only TWC 451 or 551.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 551, you may not enroll in TWC 451
TWC	**452**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for TWC 552, may not enroll in TWC 452
TWC	**453**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 453 or 553.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit in TWC 553, you may not enroll in TWC 453
TWC	**454**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 454 or 554.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	C	Pre-requisites: If you have credit for TWC 554, you may not enroll in TWC 454
TWC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**490**	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**492**	Honors Directed Study		N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-6		
TWC	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
TWC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
TWC	**501**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 501 who have credit in TWC 401
TWC	**503**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	**511**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 511 who have credit in TWC 411
TWC	**521**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 521 who have credit in TWC 421
TWC	**531**	Principles of Technical Editing	Basic principles of technical editing for print and electronic media, including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 531 who have credit in TWC 431
TWC	**543**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 543 who have credit in TWC 443
TWC	**544**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 544 who have credit in TWC 444
TWC	**545**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 545 who have credit in TWC 445
TWC	**546**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 546 who have credit in TWC 446
TWC	**547**	Business Reports	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**551**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment. Credit is allowed for only TWC 551 or 451.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 551 who have credit in TWC 451
TWC	**552**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues. Credit is allowed for only TWC 552 or 452.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 552 who have credit in TWC 452
TWC	**553**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 553 or 453.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 553 who have credit in TWC 453
TWC	**554**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 554 or 454.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
UET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**305**	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: Academic Level greater than or equal to Junior
UET	**331**	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: CHM 113, PHY 112, and EST 210 OR BAS Electronic & Energy Systems student
UET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**411**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 411 or 511.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisites: UET 331 and UET 417; Students with credit for UET 511, may not enroll in UET 411
UET	**415**	Electronic Manufacturing Engineering Principles	Electronic equipment design and fabrication principles and practice. Completion of electronics hardware design project and report.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2-3		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**416**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 416 or 516.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or co-requisites: UET 417; Credit for UET 516 or UET 416 only
UET	**417**	Semiconductor Technology Practice	Lab-based design and execution of safe and effective semiconductor fabrication operations.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: UET 331

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UET	**418**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 418 or 518.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 518, may not enroll in UET 418
UET	**421**	IC Device Characterization	Design and operation of the major classes of semiconductor devices. Characterization by parameters and their extraction. Future technology trends.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Have received a C or greater in UET331 or be currently enrolled AND be a Tech Sci: BAS or BS or MS or MS Tech or Grad Non Degree
UET	**424**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisite: UET 417; Credit not allowed for UET 424 and UET 524
UET	**426**	Software Tools for the Semiconductor Industry	Introduces software tools commonly used in the semiconductor industry, such as SUPREM IV, PSPICE, VIEWLOGIC, and ICED.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
UET	**432**	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 532 may not enroll in UET 432.
UET	**437**	Process Control and Validation	Statistical process control and its application to IC fabrication. Design, control, and performance validation techniques throughout the manufacturing process. Lecture with Web support. Prerequisite: 300-level statistics course.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisite: UET 417 with C or better or Co-enrolled in UET 417
UET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
UET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
UET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
UET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**511**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 511 or 411. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for UET 411, may not enroll in UET 511
UET	**516**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 516 or 416.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Graduate status. Credit for UET 416 or 516
UET	**518**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 518 or 418.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 518 and UET 418.
UET	**521**	Device Physics	Band structure of solids, electron hole-pairs, mobility, lifetime, fermilevel, pn junctions, diodes, and bipolar and MOS transistors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**524**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 524 and UET 424
UET	**532**	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is not allowed for both UET 432 and UET 532.
UET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Grad or Non Degree Grad student AND have a 3.0 GPA or better OR be a Senior AND a Tech Sci student AND have a 3.0 GPA or better.
UET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UNI	**100**	Academic Success at the University	Orientation to campus resources, study skills, and other academic and social issues for college students. Introduces an understanding of human diversity, values, and perspectives as they relate to student success.	N	LEC	N	OPT	University College	Dean, University College	3.		
UNI	**101**	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1.		
UNI	**150**	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	DIS	N	OPT	University College	Dean, University College	1.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	**250**	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	DIS	Y	OPT	University College	Dean, University College	1.		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**110**	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	University Academic Success Programs	3.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	University Academic Success Programs	1-4		
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	University Academic Success Programs	1-4		
URB	**100**	Introduction to Urban and Metropolitan Studies	Introduction to study of urban governance. Explores city, civil society, and urban form from different cultures and historical periods. Credit is allowed for only URB 100 or 300.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**105**	Introduction to Urban Governance	Introduces American city growth from past to present. Examines the background of major urban issues emphasizing governance, management, and policy. Credit is allowed for only URB 105 or 305.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**220**	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**240**	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
URB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**300**	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts. Credit is allowed for only URB 300 or 100.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**301**	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**302**	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**305**	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas. Credit is allowed for only URB 305 or 105.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**400**	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**406**	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 or URB 240 with C or better
URB	**410**	Urban Leadership and Collaborative Skills	Emphasizes the changing roles of leadership and collaboration in a complex, diverse, and dynamic urban environment.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
URB	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
URB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
USL	**210**	Service Learning: Independent Placement	Provides community experiences and reflection opportunities that examine community needs, the importance of civic engagement, and the effects of social injustice on our society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals. See http://servicelearning.asu.edu for more details.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
USL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
USL	**402**	Service Learning:Tutoring Community Children	Tutoring and mentoring K-8 children attending under-resourced schools in an after-school or summer program. Design and implement fun learning activities focused on reading, writing, math, and other academic subjects. Process and learn from experience through reflective writing assignments. Fulfills community service hours required by some programs and scholarships. Honors credit available via contract. No exams. No experience with children required--training is provided.Any ASU students of any major and any level (freshman-senior and grad students) may enroll. Hours listed include 30-minutes travel time to/from internship site. Transportation from the Tempe campus is available. See http://servicelearning.asu.edu/internships for more details. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
USL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
USL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
VTN	**101**	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
VTN	**102**	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisties:VTN 101 with C or better

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VTN	**201**	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 102 with a grade of C or better or currently enrolled
VTN	**202**	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 201 with a grade of C or better or currently enrolled
VTN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**321**	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 202 with a grade of D or better, or currently enrolled
VTN	**322**	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 321 with D or better
VTN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**107**	Introduction to Academic Writing for International Students	For students from non-English-speaking countries. Combines classroom and supplemental instruction with intensive reading, writing, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: TOEFL score of 0-559, ACT score of 0-18, SAT score of 0-460 or Accuplacer score of 0-4 (if test taken prior to May 12, 2009, then score 0-7)
WAC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WPC	**101**	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**301**	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	**302**	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Pre-requisites: Must be an Honors student
WPC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WPC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WSH	**370**	Sex and the City: Women, Sexuality, and Popular Culture	Examines the changing construction of young, sexually autonomous women in the city by popular media in post-WWII America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: WST 100 or WST 300 with D or better
WSH	**385**	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites:WST 100 or WST 300 with a grade of D or currently enrolled
WSH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WSH	**413**	Lesbian, Gay, and Gender Studies	Explores lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from sociological, psychological, historical, and literary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WSH	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
WSH	**421**	Girlhood and Adolescence	Examines the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU	
WSH	**464**	Voices and Visions	Explores the contributions of visionary women in the humanities; topics vary from semester to semester. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WSH	**470**	Women and Popular Culture	Interdisciplinary examination of how gender is constructed in popular cultural forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WSH	**470**	Women and Popular Culture	Interdisciplinary examination of how gender is constructed in popular cultural forms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**313**	Women and Sexuality	Explores feminist theories about women's sexuality and the relationship of these theories and related research to women's experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**360**	Women as Healers	Examines the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**372**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**375**	Women and Social Change	Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**377**	History of American Feminist Thought	Explores the development of American feminist theory from its roots to 1975.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	H & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**378**	Global Feminist Theory	Global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C & G	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	

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WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**440**	Politics of Women's Health	Interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites:May not sign up for WST 447 if received credit for SGS 454
WST	**460**	Women and the Body	Interdisciplinary look at how representations of women's bodies permeate culture and affect a woman's sense of self.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**477**	Women and Violence	Global examination of forms of violence against women at the individual, institutional, and cultural levels, and efforts to control it.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**601**	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**602**	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**603**	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**640**	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**701**	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
WST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**220**	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
WST	**276**	Feminist Foundations: Going to the Sources	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**333**	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**370**	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**376**	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**390**	Women and Religions	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**430**	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**444**	Gender, Health, and Bodies	Exploresgender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	Pre-requisites: WST 100 or WST 300 with C or better
WST	**457**	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**467**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**473**	Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**475**	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
WST	**480**	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**483**	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**485**	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled; ENG 101 or 105 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
WST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
XBA	**101**	Campus Match: Business	This prefix is used only to schedule clusters of classes for various university programs.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0.		
XEE	**101**	Campus Match:Extended Ed	This prefix is used only to schedule clusters of classes for various university programs.	N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
YDL	**201**	Introduction to Youth Studies	Introduces a perspective on the everyday lives of youth in regard to experience, sex, age, relational context, and identity.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**210**	Urban Youth and Youth Studies	Explores the lives of young people from 12 to 22 years old in urban neighborhoods, communities, and cities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**301**	Adolescent and Youth Development Leadership	Applies theory and research about youth, including how findings can be used and how theories facilitate behavior understanding.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**450**	Youth Policy	Examines various federal and state policies designed for youth, how and why policies for youth are constructed.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AAD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AAD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design MS student
AAD	**551**	Architectural Management I	Design delivery, coordination of construction documents, cost estimating, bidding and negotiations, construction observation, and postconstruction services.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be either Bldg Des(Facilities Dev/Mgt) Graduate Architecture student
AAD	**552**	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	**555**	Architect as Developer	Development building, real estate, construction funding, land acquisition, and the sources for capital.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ABS	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ABS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**207**	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**225**	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101 or CHM 113
ABS	**226**	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	
ABS	**260**	Fundamentals of Urban Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
ABS	**270**	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**274**	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**301**	Technology and Biology	Demonstrations of a broad range of innovative technologies in molecular biology, cellular and organismal biology, horticulture, and wildlife and restoration ecology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**302**	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**311**	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**312**	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: BIO 187
ABS	**350**	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	
ABS	**355**	Anatomy and Physiology of Vertebrates	Evolution, Classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology ,specializations and conservation status of the vertebrates.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**360**	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**362**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: ABS 260
ABS	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: ABS 260
ABS	**364**	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 260
ABS	**368**	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181
ABS	**370**	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181

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ABS	**372**	Ecology: Ecosystems and Landscapes	Structure and function of ecosystems, interactions of pattern and process in landscapes	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 370
ABS	**375**	Conservation Biology	Principles of conservation biology, management of threatened species and ecosystems, biodiversity patterns; emphasizes issues in the Southwest. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 & BIO 182
ABS	**376**	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**378**	Wildlife Nutrition	Principles of nutrient metabolism in wildlife species; emphasizes understanding the interaction of wildlife with their environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**380**	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**381**	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**401**	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**402**	Vegetation and Wildlife Measurement	Vegetation inventory, sampling, monitoring, and evaluation. Methods of estimating wildlife populations, activity, and home ranges.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**425**	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**430**	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**433**	Riparian and Wetland Ecology	Functions and components of riparian and wetland ecosystems and the management of these systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**434**	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**435**	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**440**	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**441**	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects. fee	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**460**	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**462**	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**465**	Senior Enterprise Project	Selection and completion of an urban horticulture project with faculty advisor approval related to the field of study.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**470**	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**471**	Ornithology	Classification and biology of birds, emphasizing North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**475**	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**476**	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**480**	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	
ABS	**481**	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**482**	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**483**	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning. Fee.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**485**	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**486**	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**489**	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**490**	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6		
ABS	**493**	Honors Thesis		N	THE	N	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6	L	Pre-requisites: Must be an Honors student
ABS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-7		
ABS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**540**	Plant Responses to Environmental Stresses	Reaction of plants to environmental stresses: aerial pollutants, fire, herbivores, floods, mechanical treatments, pesticides, and soil amendments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**550**	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**551**	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**553**	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**560**	Dynamic Spatial Modeling	Simulation modeling of landscapes, animal populations, and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**570**	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**586**	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ACC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**231**	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Not open to Pre-BIS or Interdisciplinary Studies students; CIS 105, 220 or 236 with C or better
ACC	**232**	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: WPC Accountancy and Finance majors, and other majors with School of Accountancy approval; CIS 105, 220 or 236 with C or better
ACC	**241**	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: ACC 231, ACC 261 or ACC 303 with C or better
ACC	**242**	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**261**	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	**271**	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**315**	Financial Accounting and Reporting	Accounting theory and practice related to uses of financial statements by external decision makers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 231 and ACC 241 with C or better
ACC	**316**	Mgmt Uses of Accounting	Uses of accounting information for managerial decision making, budgeting, and control.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 241 with C or better
ACC	**326**	External Financial Reporting I	Theory, U.S. standards, and practice applicable to financial statements, revenue recognition, and assets.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**327**	External Financial Reporting II	Theory, U.S. standards, and practice applicable to equities, cash flow statement, earnings per share, leases, pensions, and other essential topics.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: School of Global Management and Leadership Accountancy student; ACC 326 with C or better
ACC	**336**	Cost Management and Control	Concepts and principles for product costing, planning and control, and internal decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**340**	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with a grade of C or better. Pre- or co-requisite: FIN 300 or FIN 302 or FIN 303.
ACC	**346**	Information Systems Management	Information requirements and transaction processing for integrated accounting systems emphasizing database systems analysis and design, controls, and computer processing.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS or a Global Management student with Professional status
ACC	**350**	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better

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ACC	**356**	Income Tax Accounting	Public policy concepts and rules of federal income tax for all taxpayers. Individual tax returns and use of tax software.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 with C or better
ACC	**361**	Accounting Technology	Use and understanding of a computerized accounting package and other software for accounting applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 and 336 and 346 with C or better
ACC	**382**	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student
ACC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**410**	Contemporary Financial Reporting	Topics include financial statements, roles and effects of accounting information in society, policy setting, managers' choice of accounting techniques. Cannot be used for major credit in Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Business/Financial Mgt BS student AND have completed with a C or better FIN 300 or 301 or be currently enrolled or not be pursuing an Accountancy or Professional Accountancy certificate
ACC	**426**	Advanced Reporting: Consolidation, International, and Not-for-Profit Topics	Consolidated financial statements, not-for-profit accounting, and international accounting standards and topics including foreign currency transactions and translation.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326.
ACC	**430**	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 340 and LES 305 with C or better
ACC	**436**	Advanced Topics in Cost Management	Issues in contemporary manufacturing environments. Topics include cost estimation, activity-based management, just-in-time inventories, budgeting, and variances.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326, 331 or 336 or be currently enrolled
ACC	**440**	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	**444**	Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 with a grade of C or better.
ACC	**450**	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations. fee	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 and 444 with C or better
ACC	**476**	External Auditing	Theory and standards underlying the attestation process. Topics include evidence gathering, analysis, reporting, and development of professional judgement skills.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR Accountancy or Professional Accountancy Certificate; ACC 322 or 327 with C or better; ACC 346 or 347 with C or better
ACC	**477**	Internal Auditing	Contemporary issues and practices of internal auditing. Standards and process of management/operation audits.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326 or ACC 346 or 347.
ACC	**478**	Governmental and Not-for-Profit Accounting	Accounting and reporting systems for governmental entities, healthcare organizations, colleges and universities, and other nonprofit organizations.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 321 or 326 or be currently enrolled
ACC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**493**	Honors Thesis		N	THE	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Pre-requisites: Must be an Honors student
ACC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Pre-requisite: Accountancy BS, Finance BS or Economics BS student
ACC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	**502**	Financial Accounting	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**503**	Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student

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ACC	**511**	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**512**	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Master of Accounting student
ACC	**513**	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Specific Business Graduate majors
ACC	**561**	Auditing Through the Computer	Presents general IT audit concepts, terms, standards, practices, and current tools and techniques.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**571**	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**573**	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**575**	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**582**	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**585**	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Business Graduate student
ACC	**586**	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**588**	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	**589**	Multijursidictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Taxation student
ACC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**596**	Accounting and Leadership Capstone Project	Case-based course dealing with the pragmatics of managing risk in a variety of business settings, including public accounting, consulting, and industry.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student
ACC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		
ACC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		
ACO	**100**	Overview of Applied Computing	Internet and HTML, XML, databases, networks and distributed processing, digital media and graphic design. Opportunities, professionalism, and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
ACO	**101**	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: MAT117 or higher with C or better
ACO	**102**	Principles of Computer Science	Issues and concepts throughout computer science, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Java programming. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 101 with C or better
ACO	**201**	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	**210**	Introduction to Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 201 with C or better
ACO	**220**	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-reqiusites: ACO 201 and MAT 243 with C or better
ACO	**320**	Database Systems and Transaction Processing	Relational database normalization theory, stored procedures, triggers, and call-level interface. Data-centric XML. Transaction processing in centralized and distributed databases. Security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 220 with C or better
ACO	**330**	Computer Networks	Network architecture and protocols, flow and congestion control, switching and routing, link-layer technologies, medium access control, physical layer basics, quality-of-service, security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 102 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACO	**331**	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 330 with C or better
ACO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**420**	Object Databases	Object-oriented conceptual modeling, object-oriented databases, object-relational databases, applications. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**421**	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**422**	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**430**	Wireless Networks	Wireless transmission fundamentals, multiple access techniques, error detection and control, cellular concepts and systems, wireless LAN, performance analysis, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and STP 300 with C or better
ACO	**431**	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and MAT 243 with C or better
ACO	**432**	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210 and ACO 330 with C or better
ACO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
ACO	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
ACO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
ACO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
ADE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**321**	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Architecture student; ALA 240 with C or better
ADE	**322**	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must have completed ADE 321 with a grade of C or better or be currently enrolled; must be an Architectural Studies student
ADE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**421**	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451, ARP 484

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ADE	**422**	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must be an Architectural Studies student; Must have completed ADE 421 with a grade of C or greater or be currently enrolled; Must have completed ARP 484 with a grade of Y or be currently enrolled
ADE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ADE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ADE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ADE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ADE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	**510**	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**511**	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 510 with a grade of C or greater or be currently enrolled
ADE	**512**	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 511 with a grade of C or greater or be currently enrolled
ADE	**521**	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**522**	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ADE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**621**	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**622**	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**661**	Bioclimatic Design Studio	Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must either be Master of Architecture or Bldg Des(Energy Perform/Bldgs) MS student
ADE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AEC	**10-D**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-D**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-D**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-M**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**30**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-D**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-M**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**50-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**50-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**51-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-D**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-M**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75-D**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75-M**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-D**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-M**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-D**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-M**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**83**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-D**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-M**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**84**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-D**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-M**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**98**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**20**	Listening/Speaking		N	LEC	N	GNA	University College	NC American English and Culture Program	3-9		
AEC	**20-D**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**20-M**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**40**	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
AEP	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for PHI 501, or REL 581, may not enroll in AEP 501
AEP	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Completed AEP 501. Students with credit in PHI 502 or REL 582, may not enroll in AEP 502

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEP	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
AES	**101**	Air Force Today I	Introduces U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**102**	Leadership Lab	Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**103**	Air Force Today II	Continuation of AES 101. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AES	**104**	Leadership Lab	Continuation of AES 102 with more in-depth emphasis on learning the environment of an Air Force officer.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	**201**	The Evolution of USAF Air and Space Power I	Further preparation of the AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, quality Air Force, and values.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**202**	Leadership Lab	Application of advanced drill and ceremonies, issuing commands, knowing flag etiquette, and developing, directing, and evaluating skills to lead others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**203**	The Evolution of USAF Air and Space Power II	Continuation of AES 201. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**204**	Leadership Lab	Continuation of AES 202 with emphasis on preparation for field training.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	**301**	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**302**	Leadership Lab	Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**303**	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**304**	Leadership Lab	Continuation of AES 302 with emphasis on planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**401**	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**402**	Leadership Lab	Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**403**	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.		
AES	**404**	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		
AES	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		
AET	**191**	First-Year Seminar		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**210**	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: PHY 112; Pre/Co-requisite: MAT 266
AET	**215**	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
AET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**300**	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212

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AET	**310**	Instrumentation	Measurement systems, components, system response, and the characteristics of experimental data. Methods of collecting and analyzing data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MAT 266 or MAT 271; AET 210
AET	**312**	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 211 (or CON 221 or ETC 211 or ECE 210 or MAE 212); MAT 266 (or MAT 271)
AET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**396**	Aerospace Professional Orientation	Career focus for Aeronautical Engineering Technology students. Familiarization with the aerospace industry.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or higher academic level
AET	**415**	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 OR Technology and Innovation or Fulton Engineering Graduate student
AET	**417**	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or ECE 313); AET 312 (or ECE 312); AET 300
AET	**420**	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: AET 300; MET432
AET	**432**	Applied Heat Transfer	Heat transfer by conduction, convection, and radiation. Applies heat transfer to engineering design problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre- requisites: ETC 340 or MET 340 with D or better (or co-enrolled in ETC 340); may not enroll in AET 432 if credit received in AET 524
AET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Technology and Innovation BS student; Minimum cumulative GPA of 3.00; Minimum Junior standing
AET	**487**	Aircraft Design II	Basic aerodynamics and airplane performance analysis methods applied to practical design project.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 300; AET 417
AET	**492**	Honors Directed Study		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6		
AET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
AET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**524**	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 with D or better; May not enroll in AET 524 if you have credit in AET 432
AET	**525**	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 434, AET 415 or MAE 340
AET	**560**	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Technology Innovation or Fulton Engineering students; Senior or higher academic level
AET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		

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AET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		
AET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
AFH	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & H & G	
AFH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**300**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFH	**303**	African and African American Art	Anthropological perspective of African and African American visual art traditions from the past to 1970.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**305**	The Global History of the Trans-Atlantic Slave Trade	Origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**318**	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & G	Pre-requisites: AFH 200, WST 100, or WST 300 with D or better. Students who have credit for WST 318, may not enroll in AFH 318
AFH	**319**	Black Experience in Latin America	Examines several aspects of the experience of Africans in the Latin America diaspora; comparisons with United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**331**	Studies in African American Women Writers of Pre-Harlem Renaissance	Focuses on novels, short stories, essays, speeches, and dramas that gave voices to African American woman in pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**335**	Survey of African Literatures	Intersection of colonialism, race, class, gender, nationalism, postcoloniality, social transformation, and ethnicity in African writers' fiction and literary production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees. Fee (hybrid/Internet).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
AFH	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
AFH	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for WST 364, may not enroll in AFH 364
AFH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	
AFH	**465**	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**492**	Honors Directed Study		N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**191**	First Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**210**	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**317**	Genes, Race and Society	Examines history of biological and social constructions of race in western society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFR	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Students who have credit for TCL 335, may not enroll in AFR 335
AFR	**375**	Race, Gender and Sport	Interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**428**	Critical Race Theory	Examines ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**429**	African American Studies Theory and Methods	Examines social and behavioral science theories and methodological procedures pertaining to African Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**460**	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**490**	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
AFR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**525**	Foundations of Caribbean Studies	Broad interdisciplinary understanding of the Caribbean that surveys the region's history, politics, economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**526**	Selected Topics in Caribbean Politics	In-depth understanding of the impact of selected topics on the political economy and social infrastructure of the Caribbean.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFR	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFS	**200**	Introduction to African and African Diaspora Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**301**	Race and Racism in Africa/African Diaspora	Construction of race, racism, and race relations in Africa/African Diaspora; practices of agency to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	
AFS	**304**	Islands of Globalization: Caribbean Political Economy	Impact of globalization on the economic, political, and social condition of the islands and mainland countries of the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**310**	African/African American Psychology	Historical and contemporary overview of the development of African/Black psychology and African American frame of reference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**312**	Contemporary African and African Diaspora Women	Explores recent literary, theoretical, and methodological themes concerning the study of African/African Diaspora women and the phenomena of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**320**	Africa: Politics, Environment, and Development	Uses African experience to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**327**	Human Rights in Africa	Comparative study of human rights focusing on colonial and post-colonial Africa from historical and contemporary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: ASB 222
AFS	**340**	The Making of Modern Africa	Events and processes leading to the colonization of Africa and subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**345**	The Making of the Caribbean Society	Historical socioeconomic and political factors and institutions creating the wider Caribbean from the 15th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	

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AFS	**355**	Democracy and Civil Society in Africa	Examines contending perspectives on the state and civil society and democratic struggles using sub-Saharan Africa and case study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**360**	Black Families in the Diaspora: U.S. and Caribbean	Comparative study of historical and current themes in the structure and internal dynamics of African Diaspora families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**363**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**364**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C & H	
AFS	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**370**	Family, Ethnic, and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFS	**372**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, REL 362, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or SGS 366
AFS	**373**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
AFS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**415**	Black Political Thought and the Limits of Liberal Democracy	Critical examination of the ideas that have shaped politics in the Black World from the mid-nineteenth century onwards. These include ideas of resistance, liberation, nation and governance, emanating from Africa, the USA, the Caribbean and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**480**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**100**	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**161**	Computer Applications for Agribusiness Industries	Uses and integrates word processing, spreadsheets, and databases as tools for managing an agribusiness firm.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		

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AGB	**271**	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**302**	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	G	Prerequisites: ECN 212 with grade of C or better
AGB	**321**	Agribusiness Marketing II	Examines the food marketing system with emphasis on the marketing institutions, arrangements, and methods for basic commodities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**333**	Agribusiness Finance II	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**340**	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**360**	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**366**	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**367**	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**372**	Introduction to Veterinary Practice Management Module I	Initial offering of a three-module program that is an overview of the operation of a veterinary practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**373**	Veterinary Practice Management Module II: Human Resources	Intermediate course of a three-module program covering human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**374**	Veterinary Practice Management Module III: Finance and Marketing	Final course of a three-module program covering financial and marketing issues faced by veterinary practice managers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**410**	Agribusiness Management II	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**411**	Agricultural Cooperatives	Organization, operation, and management of agricultural cooperatives.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**414**	Agribusiness Analysis	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	L	Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed BUA 440 or BUA 441 with a C or better.
AGB	**422**	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300
AGB	**424**	Agribusiness Sales	Principles and techniques of selling and merchandising in the agricultural and food industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**425**	Agricultural Marketing Channels	Operational stages of agricultural commodities in normal distribution systems and implementation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**429**	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	**431**	Intermediate Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**433**	Intermediate Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**434**	Agricultural Risk Management and Insurance	Strategies to manage agricultural price and business risk: derivatives, insurance, self-insurance, and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**435**	Agricultural Commodities	Trading on futures markets. Emphasis on the hedging practices with grains and meats. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: FIN 300 with a C or better.
AGB	**436**	Entrepreneurship and Financial Management ofE-Commerce	Uses lectures, case studies, and business plans to highlight challenges of starting and running a small business.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**440**	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**442**	Food and Industrial Microbiology	Food- and industrial-related microorganisms; deterioration and preservation of industrial commodities. Lecture, lab.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
AGB	**445**	Food Retailing	Food retail management. Discusses trends, problems, and functions of food retail managers within various retail institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300 with C or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AGB	**451**	Management Science	Focuses on the construction, solution, and interpretation of quantitative models used for management decision making in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
AGB	**452**	International Agricultural Policy	Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**454**	International Trade	International practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: FIN 300 with C or better
AGB	**455**	Resource Management	Explores differences between societal and individual valuations of natural resources; considers public policy versus market-based solutions to environmental concerns.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	SB	
AGB	**460**	Agribusiness Management Systems	Development and use of decision support systems for agribusiness management and marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: 56 hours or more; FIN 300; MGT 300; MKT 300
AGB	**465**	Organic Farming Technologies	Organic farming methods, including certification, soil fertility, planting, integrated pest management, irrigation, cover crops, rotations, and marketing farm products.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**470**	Comparative Nutrition	Effects of nutrition on animal systems and metabolic functions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**481**	Applied Microeconomics	Emphasizes application of the theory of the firm, theory of exchange, and consumer theory.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6		
AGB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AGB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-7		
AGB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-3		
AGB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**511**	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**513**	Advanced Cooperatives	Advanced study of cooperatives and other nongovernmental organizations (NGO) focusing on management and proposal preparation for international agencies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**514**	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**528**	Advanced Agribusiness Marketing	Theory and analysis of marketing farm commodities, risks, and the effect of future trading on cash prices.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**529**	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**532**	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**535**	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**540**	Advanced Food Science	Chemical and physical nature of processed foods. Emphasizes food product development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**550**	International Agricultural Development	Transition of developing countries from subsistence to modern agriculture. Emphasis placed on implications for U.S. agribusiness working abroad.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**552**	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AGB	**554**	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**560**	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**561**	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**570**	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**581**	Advanced Agribusiness Policy	Policy-making history, structure, and process.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**589**	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
AGB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**701**	Advanced Agribusiness I	Advanced topics include demand analysis, empirical industrial organization, welfare economics, agricultural policy, international trade, and consumer behavior.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**702**	Advanced Agribusiness II	Topics include macromarketing, marketing research, futures and options markets, derivatives, risk management, financial innovation, and forecasting.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**703**	Agribusiness Research Methods	Survey course in current research methods in economics, marketing, finance, and management as applied to agribusiness topics. May be repeated for credit.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

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AGB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		
AGB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		
AIS	**180**	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**280**	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**285**	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**370**	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisite: AIS 180 with C or better
AIS	**380**	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**381**	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**420**	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	L	Pre-requisite: AIS 180 with C or better
AIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7		
AIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
ALA	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
ALA	**102**	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**121**	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student

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ALA	**122**	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 121 with a C or better; Co-requisite: ALA 124
ALA	**124**	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 122
ALA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALA	**200**	Introduction to Architecture	Surveys issues and polemics affecting current architectural theory and practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**225**	Design Fundamentals III	Applies design fundamentals with an emphasis on architectural and landscape architectural issues.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with a C or better; Passed milestone; Co-requisite: ALA 227 and ALA 235;
ALA	**226**	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: ALA 225 with C or better
ALA	**227**	Design Fundamentals III Lecture	History and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 225 and ALA 235
ALA	**235**	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisites: Architecture or Landscape Architecture student; Co-requisites: ALA 225 and ALA 227
ALA	**240**	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ALA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALD	**101**	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	
ALD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**202**	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**203**	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	**204**	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**301**	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**404**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**420**	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	**431**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531or FAS 421

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ALD	**440**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**460**	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Pre-requisites: Must be an Honors student
ALD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7		
ALD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**505**	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**520**	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	**525**	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**531**	Caregiving Issues for Familes and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	**535**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		
ALD	**540**	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**545**	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisite: Graduate students only
ALD	**560**	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ALD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**360**	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**401**	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; Credit is allowed for only ALT 401 or 501
ALT	**405**	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	**410**	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: UET 331
ALT	**420**	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: CHM 113; ALT 360
ALT	**435**	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360 and ALT 410. Students who have credit for ALT 535, may not enroll in ALT 435
ALT	**445**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 and ALT 360. Students with credit for ALT 545, may not enroll in ALT 445
ALT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
ALT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**501**	Advanced Renewable Energy: Global Hydrogen Economy	Global, comprehensive evaluation of all renewable energy sources with focus on solar cells, hydrogen, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Students who have credit for ALT 401, may not enroll in ALT 501
ALT	**502**	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**503**	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**505**	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Credit is allowed for only ALT 405 or 505
ALT	**506**	Fuel Cell Integration and Packaging	Practical overview of integration and packaging of fuel cell system, which comprises a fuel processor module, a fuel cell module.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**507**	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		

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ALT	**515**	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**535**	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit in ALT 435, may not enroll in ALT 535
ALT	**545**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is allowed for only ALT 445 or 545
ALT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		
AME	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Pre-requisites: Must be an Honors student
AME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7		
AME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**590**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1.		
AME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		

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AME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		
AME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		
AML	**100**	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
AML	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**330**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit is allowed for only ASB 430, CPI 430, or AML 330
AML	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**406**	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Completed at least two from the following: MAT 270, 271, 272; AND STP 226 (or 231 or 420)
AML	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**493**	Honors Thesis		Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**497**	Honors Colloquium		Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
AML	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AML	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**610**	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**611**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**612**	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**301**	Introduction to American Studies	Introduces the interdisciplinary study of American culture, emphasizing critical reading and writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**310**	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**311**	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**314**	Military Studies	Topics in the history of the American military.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**316**	American Religious Systems	Topics in American religion; may include Hispanic missions of the Southwest. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**320**	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
AMS	**321**	American Cultural History II	Second of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**322**	Studies in American Literature	Topics in American literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**323**	Studies in American Art and Architecture	Topics in the visual arts and material culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**326**	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**327**	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	**330**	Introduction to American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
AMS	**332**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**334**	The American Class System	Studies in social classes and their function within American society. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**335**	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**342**	Writing about American Culture	Teaches methods of writing cultural criticism, emphasizing the essay form.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**344**	Creative Writing	Emphasizes the study and practice of creative nonfiction. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**345**	Reporting	Fundamentals of news gathering, interviewing, and in-depth reporting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**346**	Editing	Theory and practice of editing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**351**	Technical Writing	Computer-based instruction in writing documents for online, oral, and print formats, focusing on audience-centered rhetoric.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**412**	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**414**	Military Studies	Topics in the history of the American military. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**417**	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**422**	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**428**	Chicano Cultures in the Southwest	Examines and explores Chicana and Chicano culture as place and sentiment. The physical place and space and the sentiment related to Chicanas and Chicanos.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
AMS	**429**	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**431**	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**432**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**490**	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
AMS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
AMS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
AMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 101 or 105 with C or better; AMS 301 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMT	**100**	Flight Operations and Safety I	Supervised private pilot flight training and flight safety briefings and recurrent aviation subjects appropriate for private pilots. Requires continuous enrollment until completion of FAA Private Pilot Certificate. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND must have C or greater in AMT 182 and AMT 220 OR Corequisite: AMT220 and AMT182
AMT	**101**	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**182**	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**200**	Flight Operations and Safety II	Supervised commercial instrument flight training, safety briefings, and recurrent aviation subjects as appropriate for commercial and instrument pilots. Requires continuous enrollment until completion of FAA Commercial Pilot Certificate with Instrument Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student AND C or better in AMT 100
AMT	**201**	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) OR Aero Mgmt Tech (AWS Mgmt) OR Air Traffic Management student
AMT	**214**	Commercial/Instrument Ground School I	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT182, AMT220 and AMT101 with C or better
AMT	**220**	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**280**	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned a D or better in PHY 111, and PHY 113
AMT	**287**	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned D or greater or currently enrolled in PHY 111 or PHY 121 OR Corequisite: PHY111 or PHY121
AMT	**300**	Flight Operations and Safety III	Supervised instructor flight training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of FAA Flight Instructor Certificate with Instrument Instructor Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student; AMT 200 with C or better
AMT	**308**	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisite: Total earned hours must be greater than or equal to 50
AMT	**322**	Commercial/Instrument Ground School II	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater or currently enrolled in AMT100, AMT182 and AMT214

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AMT	**330**	Managing Financial Resources in Aviation	Focuses on financial resource management techniques utilized by U.S. domestic air carriers and covers the unique aspects of revenue accounting and its application to airline operations. Concepts covered include: data capture of requisite information from various airline computer systems; determination of revenues generated from sales of airline products and services to customers; in-depth analysis of airline operational expenses; preparation of airline-specific accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting to U.S. governmental agencies; development/analysis of financial reports; and interline billing. Emphasizes accounting, planning, and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: AMT 308 with C or better
AMT	**350**	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements. fee	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a C or greater in AMT280 and AMT287 or be currently enrolled OR Corequisites: AMT287
AMT	**370**	Air Freight Operations	Air freight operations in National Aviation System; ramp operations, loading, weight and balance, and administration of airside and groundside operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**382**	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater in AMT200 or AMT322 or be currently enrolled
AMT	**385**	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**387**	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 200 with a C or better.
AMT	**391**	Multiengine Instructor Ground School	Ground school preparation for the FAA Multiengine Flight Instructor Rating. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisite: Technology Science BS student
AMT	**392**	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must be Technology Science BS student AND earned C or greater or currently enrolled in AMT 200 and AMT 385
AMT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**396**	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisite: Technology Science BS or BAS student; Minimum 50 hours
AMT	**400**	Flight Operations and Safety IV	Multiengine and crew training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of multiengine rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 300 with a C or better.
AMT	**401**	Multiengine Instructor Rating	Normal and emergency flight operations. Instruction techniques and procedures for light multiengine land, airplane. CFIAME Rating required for course completion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**408**	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must have a C or greater in AMT 308 or be currently enrolled
AMT	**410**	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**412**	Air Transportation Research	Surveys practical research methodology in use in the air transportation industry. Topics include planning and design considerations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**442**	Aviation Law/Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**444**	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum Junior standing
AMT	**482**	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT200 or 322 with a C or better; AMT 382 with a C or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
AMT	**486**	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT300, AMT382 and AMT 482 with C or better
AMT	**488**	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT 300, AMT 382 and AMT 482 with C or better
AMT	**489**	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic level must equal Junior or greater AND must have a C or greater in AMT 308 or be currently enrolled
AMT	**490**	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Aero Mngt Tech (Prof Flight) student; AMT 300, 400, 382, 482, 486 and 488 with C or better
AMT	**491**	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic Level greater than or equal to Senior
AMT	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Prerequisite: University Cumulative GPA is greater than or equal to 2.25
AMT	**496**	Airline Aircraft Systems Capstone	Commercial airline aircraft systems and flight procedures. Includes theoretical education for large, commercial passenger aircraft.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
AMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
AMT	**520**	Airline Pricing and Yield Management	Airline economics at the operating level; historical and current operational strategies; demand, traffic, price, yield, revenues, and costs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**521**	Air Transportation Regulation	Reviews evolutionary history of government regulations. Explores alternatives for economic, safety, social, and administrative regulatory reform in air transportation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**522**	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**523**	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**524**	Airport Management and Operations	Overview of planning, funding, and development of airport facilities; legal and ethical considerations associated with airport management operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**525**	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**526**	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**527**	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**528**	International Aviation	Major issues of international aviation, historical review of institutional framework. Bilateral route agreements, freedom versus sovereignty, current legal and political arrangements.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater

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AMT	**529**	Fixed-Base Operations Management	Examines FBO role in the national aviation system. Organization of flight line operations, aircraft maintenance, and administration for multiple aircraft types.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**532**	Managing Diversity in Aviation	Examines group identity and cognitive styles, cross-cultural issues, language and diversity, and effects of aviation culture on management of diversity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**541**	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**542**	Human Factors in Automation	Examines human factors issues associated with automation. Includes impact of automation design, workload, stress, and system complexity on human operators.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**545**	Human Factors in Aviation	Overview of human role in aviation. Issues, problems of unsafe acts and attitudes in human behavior. Human engineering capabilities and limitations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**546**	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**549**	Applied Human Factors Research	Aviation human factors research principles applied and tested in operational settings. Group projects assigned in conjunction with industry partners.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
ANB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

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

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANB	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**475**	Computer Programming in Architecture	Computer programming for architectural problems and applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ANP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ANP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ANP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	**530**	Computer Graphics in Architecture	Fundamentals of computer graphics programming in architecture, including graphics hardware, device-independent packages, 2- and 3-D transformations, and data structures.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be MS Building Design Knowledge and Computing student
ANP	**561**	Architectural Information Processing Systems	Applies information processing systems to architectural problems. Analyzes computing tools with respect to assumptions and theories.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bld Design (Knowledge/Compng) MS student
ANP	**563**	Methods in Architectural Design Computation	Concepts and models for research in computer-aided architectural design with an emphasis on computational methods and a system framework.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Bld Design (Knowledge/Compng) MS student
ANP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
ANP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	**681**	Project Development	Defines and elaborates on major ideas for implementation in ADE 622 in relation to contemporary theory and practice.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student

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ANP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**200**	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
APA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**315**	Asian Pacific American Literature	Explores the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**330**	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**340**	Asian Pacific Americans and Media	Analyzes social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C & H	
APA	**360**	Asian Pacific American Experience	Historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**450**	Asian Pacific American Contemporary Issues	Focus on issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
APA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
APA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
APH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**300**	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	**305**	Contemporary Architecture	Europe and America from the foundations of the modern movement to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Non-majors only (non-architecture students)
APH	**313**	History of Architecture I	Surveys the monuments, buildings, and cities of Europe and Africa from the earliest human settlements to the present day.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisite: Juniors and Seniors only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	**314**	History of Architecture II	Surveys the monuments, buildings, and cities of Asia and the Americas from the earliest human settlements to the present day.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisites: APH 313 with a C or better
APH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**411**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
APH	**414**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for PUP 412 or APH 414 only
APH	**421**	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L or HU	Pre-requisites: Architecture student; APH 313 and APH 314 with C or better
APH	**441**	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**446**	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**447**	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
APH	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
APH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
APH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**505**	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	**509**	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	**511**	Energy Environment Theory	Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Architecture, Master of Urban Design or Building Design MS student
APH	**515**	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**581**	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**588**	Spanish Language Acquisition		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
APL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
APL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**601**	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
APL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
APM	**501**	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**502**	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**503**	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzela Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p-spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**504**	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**505**	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**506**	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**520**	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**521**	Numerical Analysis for Ordinary Differential Equations	Stability, accuracy, consistency, RK methods, finite differences, linear partial differential equations, dispersion, dissipation, method of lines. Applications and programming. Students should have had a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**522**	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**523**	Optimization	Linear programming, unconstrained nonlinear minimization, line search algorithms, conjugate gradients, quasi-Newton methods, constrained nonlinear optimization, gradient projection, and penalty methods. Completion of courses in Applied Linear Algebra and Computational Methods is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	**524**	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**525**	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**526**	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**530**	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**531**	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**532**	Mathematical Neuroscience II	Mathematical modeling of systems neuroscience. Network dynamics, coupled phase oscillators, central pattern generators, neural coding, learning and memory. Students should have taken ordinary differential equations or mathematical cell physiology or mathematical neuroscience prior to enrolling in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**533**	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**534**	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**535**	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**541**	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**553**	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**560**	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**561**	Nonlinear Analysis of PDEs in Fluids	Sobolev spaces; incompressible Euler and Navier-Stokes equations; weak and strong solutions; attractors and the connection with turbulence; geophysical applications. Completion of a course in Differential Equations II is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**570**	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	**575**	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	**576**	Theory of Partial Differential Equations	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**577**	Theory of Partial Differential Equations	Continuation of APM 576. Completion of a course in the Theory of Partial Differential Equations is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**581**	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**582**	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
APM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
APM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
APM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
AR	**461**	Adv Ceramics I		Y	LEC	Y	CNV	Herberger College of the Arts	School of Art	3.		
ARA	**110**	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1.		
ARA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**195**	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARA	**202**	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**311**	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Non-ART student; ENG 101; ENG 102; Minimum Junior standing
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	**488**	Understanding Art	Understanding art as an emergent cultural phenomenon with an emphasis on a critical examination of conceptual issues in art. Writing required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L or HU	Pre-requisites: ARS 101; ARS 102
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARB	**101**	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**102**	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**201**	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**202**	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**311**	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**321**	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**331**	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**335**	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
ARB	**341**	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**351**	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**411**	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**421**	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
ARB	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ARB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ARB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	**250**	Teaching Inquiry in Art	Uses inquiry and literacy processes to teach young people through adults to make and understand art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		

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ARE	**301**	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARE	**370**	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with C or better
ARE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**440**	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Must be an Art student. Completed ARE 250 with a B- or better
ARE	**482**	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Fine Arts Art student
ARE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**486**	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 482 with C or better
ARE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARE	**493**	Honors Thesis		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**496**	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with B- or better
ARE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	**510**	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**520**	Issues in Teaching Inquiry in Art	Issues in teaching and learning through inquiry about artworks using print and electronic reproductions and information.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**525**	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**530**	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**535**	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**540**	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**610**	Issues and Trends in Art Education	Doctoral-level investigation of historical and contemporary issues related to teaching and research in art education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**611**	Curriculum Development in Art Education	Doctoral-level inquiry into the philosophical, psychological, and sociological foundations of curriculum development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**451**	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ARP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Architecture student
ARS	**100**	Introduction to Art	Understanding of art and its relationship to everyday life through painting, sculpture, architecture, and design. No credit for Art majors or non-Art majors who have completed ARS 101 or 102 or 300.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 101, 102, or ARS 300 may not enroll in ARS 100
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**201**	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**250**	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**300**	Introduction to Art	Course content same as ARS 100 but requires a higher level of accomplishment and comprehension. No credit for Art majors or non-Art majors who have completed ARS 100. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 100 may not enroll in ARS 300
ARS	**302**	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	**310**	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**340**	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**362**	Pre-Columbian Art I	Architecture, sculpture, ceramics, painting, and other arts of Mesoamerica before European contact. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**365**	Native North American Art	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**400**	History of Printmaking	History of the print as an art form and its relation to other modes and forms of artistic expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**402**	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better
ARS	**404**	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 with C or better; Minimum Junior standing; Credit is allowed for only ARS 404 or 504
ARS	**406**	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**410**	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**412**	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**414**	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better; Students who have credit for ARS 514, may not enroll in ARS 414
ARS	**416**	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**417**	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 417 or 517
ARS	**418**	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**422**	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**424**	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**426**	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**428**	Art of the 18th Century	History of painting, sculpture, architecture, graphic arts, and the decorative arts from 1700 to the French Revolution (1789).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 428 or 528
ARS	**430**	Art of Spain and its Colonies	Architecture, painting, and sculpture from 1500 to 1800. Colonial focus on central Mexico and the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 430 or 530
ARS	**432**	19th-Century French Art and Culture	History of painting, graphic arts, sculpture, and architecture, 1800 to 1900 in France in its political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better
ARS	**434**	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 534, may not enroll in ARS 434
ARS	**435**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**436**	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**437**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ARS	**438**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisite: ARS 102 with C or better
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better
ARS	**442**	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**451**	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**458**	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**459**	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 458
ARS	**460**	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 439
ARS	**466**	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	
ARS	**468**	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**469**	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art hIstory requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**472**	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**473**	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**475**	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 475 or 575
ARS	**480**	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**485**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 585, may not enroll in ARS 485
ARS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	**501**	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**502**	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101 with C or better
ARS	**504**	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504

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ARS	**506**	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**514**	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or Post Bacc Undergraduate or a Graduate Student; Students who have credit for ARS 414, may not enroll in ARS 514
ARS	**516**	Critical Approaches to Gothic Art	Architecture, sculpture, painting, and the minor arts in western Europe, ca. 1150-1350, considered within religious, social, and economic contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**517**	Critical Approaches to Late Gothic Art	Art of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts. Requires research or reading project.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 417 or 517
ARS	**522**	Sixteenth-Century Italian Art	Critical study of painting, sculpture, and architecture in 16th-century Italy in its religious and historical context.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**528**	Eighteenth-Century Art in Europe	Critical study of European art from the late Baroque to the early years of Neoclassicism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 428 or 528
ARS	**530**	Art of Spain and New Spain	Critical study of architecture, painting, and sculpture from 1500 to 1800.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 430 or 530
ARS	**532**	Art, Politics, and Patronage, 1770-1850	Critical analyses of political events in Europe. Examines issues of patronage, art as propaganda. Impact of war and revolution on visual arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**534**	Studies in Modern European Art, 1850-1914	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours must be greater than or equal to 108; Must be a Senior or a Post Bacc Undergraduate or be a Graduate Student. Students who have credit for ARS 434, may not enroll in ARS 534
ARS	**542**	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**562**	Art of Ancient Mesoamerica	Critical study of art and architecture of Mexico and Maya areas before Spanish contact.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**565**	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**574**	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101, ARS 102 with C or better
ARS	**575**	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 475 or 575
ARS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**585**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Students who have credit for ARS 485, may not enroll in ARS 585
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**438-W**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**453**	Experimental Printmaking	Alternative techniques and methods to traditional approaches to printmaking. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger College of the Arts	School of Art	3.		
ART	**111**	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**112**	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**113**	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**115**	3-D Design	Fundamentals of 3-D form. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**201**	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Co-requisite: ART 202
ART	**202**	Photography I Lab	Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0.		Co-requisite: ART 201
ART	**204**	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisites: Art Undergraduate student; ART 101 or ART 201 with C or better
ART	**205**	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 201, 202 with C or better
ART	**211**	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**214**	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. Lab. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**223**	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**227**	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**231**	Sculpture I	Explores sculptural forms through concepts related to basic materials. Focus on studio production, safety, aesthetic criticism, and history of sculpture. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 115 with C or better
ART	**253**	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:Art undergraduate student; ART 113 with C or better
ART	**261**	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 112 and ART 115 with C or better
ART	**272**	Metalworking I: Introduction	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming. Not open to seniors. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**274**	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**276**	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, feltmaking, dyeing, block printing, plaiting, 3-D structures. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**301**	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art major with completed portfolio; ART 204 with C or better
ART	**304**	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better

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ART	**307**	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student; ART204 and (ART101 or ART201) with C or better
ART	**308**	Digital Photographic Images I	Scanning, manipulation, refinement, and compositing of photographic images on the computer. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**311**	Drawing III	Emphasizes composition, exploration of drawing media. 6 hours a week. Requires acceptance into the appropriate professional program or instructor approval. Contact your academic advisor in the School of Art for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 with C or better
ART	**314**	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student or completion of portfolio milestone; ART 214 with C or better
ART	**323**	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio; ART 223 with C or better
ART	**325**	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 214 and ART 323 with C or better
ART	**327**	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 227 with C or better
ART	**331**	Sculpture II	Continuation of ART 231 with an emphasis on metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio completed; ART 231 with C or better
ART	**332**	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: ART 331 with C or better
ART	**333**	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 332 with C or better
ART	**345**	Visualization and Prototyping I	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Digital Art OR Intermedia student
ART	**346**	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequistes: Must be an ART student
ART	**348**	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ART 346 with C or better
ART	**351**	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. Studio 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): ART 253 with C or better
ART	**352**	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**354**	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student; Completed two from ART 111, 112, 113 with D or better
ART	**355**	Printmaking as Photography	Introduces photographic principles and skills for photomechanical printmaking processes, including photosilkscreen, photolitho, and photoetching. 6 hours a week. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**360**	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application. 6 hours a week. May be repeated once for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 with C or better
ART	**363**	Ceramic Clay-Glaze		N	LEC	N	CNV	Herberger Inst Design & Arts	School of Art	3.		
ART	**364**	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 with C or better
ART	**365**	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**372**	Metalworking II	Metal fabrication techniques including surface embellishment. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**373**	Metalworking III	Compression, die, and stretch forming as applied to hollow form construction. Hot and cold forging techniques as applied to smithing. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**374**	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 with C or better
ART	**376**	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**377**	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		

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ART	**403**	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**404**	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**406**	Photo Techniques	Camera and darkroom techniques with emphasis on creative control of the black and white print. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student and you must have a C or greater in ART204 AND ART101 or ART201
ART	**408**	Digital Photographic Images II	Develops personal aesthetic in digital photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:ART 308 with a grade of D or better
ART	**409**	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**410**	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**411**	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 and ART 311 with C or better
ART	**414**	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ART 314
ART	**415**	Art Anatomy	Study of human anatomical structures as applied to the practice of figure-oriented art. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	4.		Prerequsites: Art student; ART 214 with C or better
ART	**423**	Painting III	May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223 and ART 323 with C or better
ART	**425**	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223, ART 323 and ART 314 with C or better
ART	**427**	Advanced Watermedia	Continuation of ART 327. Advanced techniques, concepts, and methods with watercolor and other water-based media on paper. 6 hours a week. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**431**	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and 332 with C or better
ART	**432**	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**435**	Foundry Research Methods	Research in foundry techniques.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**436**	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and ART 332 with C or better
ART	**437**	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**438**	Experimental Systems in Sculpture	Simple electrical and mechanical systems that can be utilized in the context of studio art and installations. Requires active production of studio artworks. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**439**	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**440**	New Media Concepts	Continued experiments with new media and interdisciplinary concerns in art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Corequisite(s): ART 441
ART	**441**	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1.		Pre-requisite: Art portfolio completed; Co-requiste ART 440
ART	**442**	Folk/Outsider Art	Explores ideas, attitudes, and art of contemporary self-taught, visionary, and outsider artists. Research and studio practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**443**	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: Art student
ART	**449**	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346 and ART 348 with C or better
ART	**450**	Computer Animation and Audio	Integrates audio with 3-D animation for fine arts applications. Includes compositing and effects. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346, ART 348 and ART 449 with C or better
ART	**451**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 351 with C or better. Credit is allowed for only ART 451 or 551

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**452**	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 352 with C or better
ART	**454**	Advanced Screen Printing	Continuation of ART 354. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 354 with C or better
ART	**455**	Advanced Photo Processes for Printmaking	Continued study of photomechanical techniques and applications to printmaking or photographic processes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 355 with C or better
ART	**456**	Fine Printing and Bookmaking I	Letterpress printing and typography as fine art. Study of history, alphabets, mechanics of hand typesetting, presswork, and various forms of printed matter. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**457**	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 456 with C or better
ART	**458**	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**459**	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student or Completed the portfolio milestone; ART 253 with C or better
ART	**460**	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Art student AND you must have a C or greater in ART261 AND ART360 AND ART364(or be currently enrolled in ART360 & ART364) AND
ART	**463**	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 and ART460 with C or better
ART	**466**	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**470**	Computer Animation Portfolio	Production of videotape and CD 3-D animation portfolios for fine arts and industry integrating animation, video, and audio. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequsites: You must be an ART student AND you must have a C or greater in ART346 AND ART348 AND ART449(or be currently enrolled in ART348& ART449) AND
ART	**472**	Metalworking IV	Forging, forming, and surface metalworking techniques with a focus on personal statements and craftmanship. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 372 with C or better
ART	**473**	Metalworking: Special Problems	Special problems in metalworking related to techniques and individual directions. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 373 with C or better
ART	**474**	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 and ART 374 with C or better
ART	**476**	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 376 with C or better
ART	**477**	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 377 with C or better
ART	**478**	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	**479**	3-D Fibers	Explores traditional and nontraditional 3-D fiber techniques and media. Discussion, research, and critiques augment technical demonstrations. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisite: Art student
ART	**492**	Honors Directed Study		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**493**	Honors Thesis		N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequsites: You must be an Honors student
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Pre-requsite: Art student
ART	**530**	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**540**	Digital Motion Studies	Fine arts digital motion studies using computer animation and video. Studio. Fee. Prerequisite: ART 346 or instructor approval. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**551**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ART 451 or 551
ART	**582**	Art Research	Independent study research using classroom facilities and supplies.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**621**	Studio Problems	Advanced study. 6 hours a week each section. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ART	**682**	MFA Exhibition Research	MFA exhibition practicum using classroom facilities and supplies. Can be used in place of ART 680.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requsite: Art student
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AS	**150**	Animal Husbandry		Y	LEC	Y	CNV	Ira A. Fulton Engineering	W. P. Carey School of Business	3.		
ASB	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**101**	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
ASB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: Students who have credit for SSH 200, may not enroll in ASB 200. Must have ENG 101, 105, 107, or ENG 111.
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**210**	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**223**	Buried Civilizations of the Americas	Archaeology through examination of several ancient civilizations of Meso-, South, and North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**230**	Beginning Culture Theory	Bridges ASB 102 and upper-division courses; introduces cultural theory and fosters independent thinking, critical analysis, communication, and adaptability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**231**	Arch Field Methods	Excavation of archaeological sites and recording and interpretation of data. Includes local field experience.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**252**	Anthropology of Sports	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASB	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better,. If you have credit in SSH 301 or HST 301, you may not enroll in ASB 301
ASB	**302**	Ethnographic Field Study in Mexico	Fieldwork study of cultural adaptation, Mexican culture, United States-Mexican cultural conflict, ethnographic research methods, and local culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**310**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**314**	Comparative Religion	Origins, elements, forms, and symbolism of religion; a comparative survey of religious beliefs and ceremonies; the place of religion in the total culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

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ASB	**320**	Indians of Arizona	Traditional cultures and the development and nature of contemporary political, economic, and educational conditions among Arizona Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & H & C	
ASB	**322**	Peoples of Mesoamerica	Indigenous, mestizo, and national cultures, rural and urban peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**324**	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**325**	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**326**	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**327**	Action Anthropology	Explores contemporary issues and problem solving in Cuna, Micronesia, Mayan, and U.S. Latino communities, through applied anthropology and community initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**328**	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	**330**	Principles of Archaeology	Methods and theories for reconstructing and explaining the lifeways of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ASB 222 or ASB 223, with a grade of D or better
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**337**	Pre-Hispanic Civilization of Middle America	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**338**	Archaeology of North America	Origin, spread, and development of the prehistoric Indians of North America up to the historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**344**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU	
ASB	**351**	Psychological Anthropology	Approaches to the interrelations between the personality system and the sociocultural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	
ASB	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	**361**	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**362**	The Neolithic Revolution and its Consequences	Surveys models for the appearance of food production in the Old World, and its consequences for emergent social complexity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**368**	Prehistoric and Historic Hunter-Gatherers	Studies known hunting and gathering societies with the goal of developing approaches to understanding past hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**400**	Cultural Factors in International Business	Anthropological perspectives on international business relations; applied principles of cross-cultural communication and management; regional approaches to culture and business.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**402**	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**412**	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**416**	Economic Anthropology	Economic behavior and the economy in preindustrial societies; description and classification of exchange systems; relations among production, exchange systems, and other societal subsystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**417**	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit for only AML 330, CPI 430, or ASB 430
ASB	**443**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for SSH 403, you may not enroll in ASB 443
ASB	**452**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better, or currently enrolled. If you have credit for SSH 402, you may not sign up for ASB 452
ASB	**455**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**462**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
ASB	**463**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**464**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for TCL 444,may not enroll in ASB 464
ASB	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**471**	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**480**	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**481**	Language and Culture	Applies linguistic theories and findings to nonlinguistic aspects of culture; language change; psycholinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**483**	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	**485**	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**489**	Doing Research in Anthropology	Research process learned through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing Rotating topics. May be repeated for credit.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 credit hours; Students who have credit for PUP 490 may not enroll in ASB 490
ASB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		

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ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**501**	Applied Medical Anthropology	Overview of anthropology's applications in medicine and its adaptations to U.S. ethnic populations. Requires research project in medical setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**502**	Health of Ethnic Minorities	Prevalence of illness, risk factors, health ecology, and medical and indigenous treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**504**	Ethnic Relations	Structural processes of intergroup relations, methods for investigating psychocultural dimensions of ethnicity with focus upon U.S. ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**506**	Gender, Emotions, and Culture	Relationships among gender and emotion across cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**525**	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**529**	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**530**	Ecological Anthropology	Relations among the population dynamics, social organization, culture, and environment of human populations, with special emphasis on hunter-gatherers and extensive agriculturalists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**531**	Anthropology of Development	Theories of development and the human and environmental consequences of development, with particular emphasis on rural Southeast Asia.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**532**	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**533**	Sustainable Urban Dynamics.	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites:If fyou have received credit for SOS 532, you may not enroll in ASB 533. Graduate students only
ASB	**536**	Ethnohistory of Mesoamerica	Indigenous societies of southern Mexico and Guatemala at Spanish contact and their postconquest transformation. Emphasis on the Aztec Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**537**	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**540**	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	**541**	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**542**	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**543**	Method and Theory of Archaeology II	Covers concepts of social complexity along with economy, demography, and social dynamics, followed by archaeological research design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**544**	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**546**	Pleistocene Prehistory	Development of society and culture in the Old World during the Pleistocene epoch, emphasizing technological change through time and the relationship of people to their environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**547**	Issues in Old World Domestication Economies	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**549**	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**550**	Economic Archaeology	Prehistoric economies in hunter-gatherer, tribal, and complex societies. Covers subsistence strategies, craft production and specialization, and exchange.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**551**	Prehistoric Diet	Critical review of techniques for recovering dietary information and theoretical models concerned with explaining diet and nutrition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**555**	Complex Societies	Examines structural variations in hierarchically organized societies, along with origins, dynamics, and collapse.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**558**	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**559**	Archaeology and the Ideational Realm	Postprocessual and other views concerning relevance of mental phenomena for understanding sociocultural change. Various approaches to inferring prehistoric meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**560**	Archaeology of the Social Realm.	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**563**	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**567**	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**568**	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**570**	Immigration to the U.S.	Covers some of the major topics and issues in immigration studies with a focus on the United States. Uses both theoretical works dealing with the causes and consequences of international migration and ethnographic accounts of actual immigrant lives. Broadly interdisciplinary and incorporates perspectives from sociology, political science, economics, and other fields; emphasizes anthropological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**571**	Museum Principles	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**572**	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**573**	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**574**	Exhibition Planning and Design	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**575**	Computers and Museums	Basics of museum computer application; hardware and software; fundamentals of database management; issues of research, collections management, and administration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**576**	Museum Interpretation	Processes of planning, implementing, documenting, and evaluating educational programs in museums for varied audience--children, adults, and special interest groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**577**	Principles of Conservation	Preservation of museum objects: nature of materials, environmental controls, and causes of degradation; recognizing problems, damage, and solutions; proper care of objects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**579**	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(HU or SB) & G	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
ASB	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
ASB	**340**	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic, and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**346**	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
ASB	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**440**	Women in the Global Factory	Examines the impact of Third World women's incorporation into the new global division of labor in the late 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**441**	Sexuality and Culture	Uses a global, comparative approach to examine the cultural and historical construction of sexualities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**442**	Urban Anthropology	Issues in understanding urban culture and social space from interdisciplinary anthropological perspective. May involve fieldwork. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	

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ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-4	(HU or SB) & G	
ASC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**301**	Contextual Uses of Algebra in Technology	Uses algebra to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: Polytechnic BAS student
ASC	**302**	Contextual Uses of Geometry in Technology	Uses geometrical concepts to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**303**	Contextual Uses of Trigonometry in Technology	Topics for close examination in selected dramatic and/or nondramatic works. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**315**	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	
ASC	**325**	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ASC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Polytechnic BAS student
ASE	**549**	Stat Applicatns Engr		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Arizona State University	3.		
ASE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
ASE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
ASE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		

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ASE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
ASE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASM	**104**	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SB or SG	
ASM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	**246**	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**275**	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASM	**301**	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites:ASM 104 with a grade of D or better
ASM	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASB 222
ASM	**338**	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		
ASM	**341**	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104
ASM	**342**	Human Biological Variation	Evolutionary interpretations of biological variation in living human populations, with emphasis on anthropological genetics and adaptation. Nutrition and disease and their relation to genetics and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASM	**344**	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	H	Pre-requisites:ASM 104 with a grade of D or better
ASM	**345**	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104, or BIO 100, or BIO 187, or BIO 188, with a D or better
ASM	**348**	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**365**	Laboratory Methods in Archaeology	Techniques of artifact analysis. Basic archaeological research techniques; methods of report writing. May be repeated for credit for total of 8 hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104 with a D or better
ASM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 (or SSH 100) and ASM 104 with a D or better
ASM	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for SSH 414, or SOS 414, may not enroll in ASM 414; Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
ASM	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in SOS 424 or BIO 424, may not enroll in ASM 424

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ASM	**435**	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**443**	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
ASM	**448**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with a grade of D or better
ASM	**450**	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 104
ASM	**452**	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	**454**	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ASM	**455**	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisite: ASM 343
ASM	**456**	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 345
ASM	**459**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 341 and 275 with a D or better. Students who have credit for ASM 559, may not enroll in ASM 459
ASM	**460**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	**465**	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	
ASM	**472**	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASM	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASM	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6.		Pre-requisites: May earn credit for BIO 506, ASM 506 or MCB 506 only. Graduste student only.
ASM	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**525**	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**530**	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**543**	Primatology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**548**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**552**	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate students only. Students who have credit for ASM 452, may not enroll in ASM 552
ASM	**555**	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	**559**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 459 or 559
ASM	**560**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**565**	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**566**	Advanced Topics in Quantitative Archaeology	Archaeological issues associated with quantitative analysis, e.g., Bayesian and Monte Carlo approaches, simulation, diversity. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 565 with a D or better. Graduate student only
ASM	**568**	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**573**	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**611**	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ASM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
AST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**321**	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**322**	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	Pre-requisites: MAT 270 (or MAT 265), PHY 150 (or PHY 121/122) with C or better
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**421**	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**422**	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**492**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Pre-requisites: Must be an Honors student
AST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**521**	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**522**	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**523**	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**531**	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**532-M**	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**533**	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**591-M**	Seminar		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre- or Co-requisites: AST 112 or AST 322 (with or better if completed)
AST	**301**	Discovering the Sun and Its Planets	Comprehensive course in astronomy for non-science majors. Course will include lectures, written assignments, and hands-on work. Not open to students with credit in AST 111 (available at the Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
AST	**302**	Modern Astronomy	Comprehensive course in astronomy for non-science majors. Covers achievements and controversies of 20th century astronomy through lectures, written assignments, and hands-on work. Not open to students with credit in AST 112 (available at Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	**101-HNR**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1.		Pre-requisite: Barrett Honors student
ASU	**101-CPP**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Public Programs	College of Public Programs	1.		Pre-requisite: College of Public Programs student
ASU	**101-CTI**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Tech & Innovation	Dean, College of Technology and Innovation	1.		Prerequisite(s): College of Technology and Innovation student
ASU	**101-CS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Cronkite School of Journalism and Mass Communication student
ASU	**101-HDA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		Pre-requisite: Herberger Institute of Design and the Arts student
ASU	**101-FSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-LA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1.		Pre-requisite: College of Liberal Arts & Sciences student
ASU	**101-TE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Teacher Education and Leadership student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	**101-NCIAS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: New College of Interdisciplinary Arts & Sciences student
ASU	**101-NU**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing & Healthcare Innovation students only
ASU	**101-SOS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1.		Pre-requisite: School of Sustainability student
ASU	**101-UC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1.		Pre-requisite: University College student
ASU	**101-WPC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1.		Pre-requisite: W.P.Carey student
ATC	**230**	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ATC	**331**	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**332**	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**333**	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**431**	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: ATC 331 with C or better
ATC	**432**	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:completed ATC 332 with C or better
ATC	**433**	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Completed ATC 333 with C or better
ATC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		

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ATC	**491**	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: ATC 331 and ATC 332
ATE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**361**	Building Structures I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisite: ADE 321
ATE	**362**	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 361 with C or better
ATE	**451**	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 421
ATE	**452**	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ATE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**521**	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**550**	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**553**	Building Systems III	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisite: ADE 521; ATE 563
ATE	**556**	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 522 and APH 505
ATE	**557**	Construction Documents	Production of architectural working drawings; legal status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**560**	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATE	**562**	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**563**	Building Structures III	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ATE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**582**	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AVC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**301**	Architectural Communication	Communication skills for architecture studios. Emphasis on graphics, drawing conventions, media, computer-aided design, design of presentations, and oral presentations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		

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AVC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AVC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AVC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AVC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**461**	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms. Credit is allowed for only BCH 461 or 361.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; Co-requisites: CHM 341 or CHM 346 (with C or better if completed)
BCH	**462**	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: BCH 461 with C or better
BCH	**463**	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 341 or CHM 346 with C or better
BCH	**464**	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre-requisites: BCH 467 with a grade of C or better; Pre-or-Co-requisite: BCH 463 (with a grade of C or better if completed)
BCH	**465**	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 462 with a C or better
BCH	**467**	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		
BCH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
BCH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
BCH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**501**	Current Topics in Biochemistry	May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
BCH	**561**	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**568**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BCH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 353 (or LSC 353) with C or better; CHM 231 or CHM 234 or CHM 334 with C or better; Credit is allowed for only BCH 361 or 461 (or LSC 366)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCS	**101**	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
BCS	**102**	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 101 with a grade of D or better, or currently enrolled
BCS	**201**	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 102 with a grade of D or better, or currently enrolled
BCS	**202**	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 202 with a grade of D or better or currently enrolled
BCS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	**495**	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
BDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
BDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Graduate College	1-12		

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BDE	**701**	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Graduate College	Graduate College	9.		
BDE	**702**	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**721**	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**722**	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**751**	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Graduate College	Graduate College	1.		
BDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		
BDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Graduate College	Graduate College	1-15		
BE	**333**	Issues in Teaching		Y	LEC	Y	CNV	Institute & Grad Sch Education	Dean, W.P. Carey School of Business	3.		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites:with a C or better:BIO 187 (or MBB 245, or both PLB 200 and PLB 201) and BIO 188(or MBB 247)
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better

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BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 480 with C or better
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**189**	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
BIO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	Pre-requisites:BIO 201 with a grade of D or better
BIO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**302**	Cancer and Heart Disease	Incidence and mortality statistics for cancer and heart disease; host and environmental risk factors; diagnosis, treatment and prevention strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with a C or better
BIO	**303**	Radiation and Life	Benefits and risks of radiation exposure in society; medical applications, food irradiation, nuclear power, solar UV, population health effects. Cannot be counted toward a biology major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with C or better
BIO	**304**	Radiation Medicine and Biology	Uses of radiation in medicine, including CT, diagnostic x rays, MRI, nuclear medicine, ultrasound; biological effects of radiation with emphasis on cancer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 188 with a grade of C or better
BIO	**310**	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**311**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with a C or better: BIO 187 (or both PLB 200 and PLB 201) and BIO 188. Students with credit for HPS 340, may not enroll in BIO 311
BIO	**312**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	
BIO	**314**	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: BS Biology and Society Concentration majors; a C or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**315**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	**316**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	
BIO	**318**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
BIO	**319**	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**321**	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre/Co-requisites: BIO 320 with C or better if completed

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BIO	**322**	Conservation Biology and Ecological Sustainability I	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**323**	Conservation Biology and Ecological Sustainability II	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**324**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	
BIO	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 187 or GLG 101 with C or better; If you have credit in GLG 325, you may not enroll in BIO 325
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:with a C or better:BIO 187 (or MBB 245, or both PLB 200 and PLB 201) and BIO 188(or MBB 247)
BIO	**342**	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites:BIO 340 or BIO 341 with a D grade or better, or be co-enrolled in either BIO 340 or BIO 341
BIO	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisite: MBB 247 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	**344**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better; CHM 113 and CHM 116 with C or better
BIO	**346**	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**352**	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites:BIO 187 and BIO 188 with a C grade or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better
BIO	**361**	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**386**	General Entomology	Form, activities, and classification of insects. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a grade of C or better
BIO	**390**	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**402**	Service Learning	Provides academic enrichment and mentoring to economically disadvantaged children; related to course work in biology; requires weekly reflective reading and writing.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	
BIO	**406**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: C or better in:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**410**	Techniques in Wildlife Conservation Biology	Field and analytical techniques used to evaluate wildlife populations, their structure, viability, and environmental impacts. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320, BIO 322, and BIO 323 with C or better
BIO	**411**	Quantitative Conservation Biology	Principles of conservation science; demography and extinction risk; practical approaches to conserving small, declining, and exploited populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320, BIO 322 and BIO 323 with "C" or better
BIO	**412**	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	**414**	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisites: BIO 314 with C or better

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BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**416**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
BIO	**417**	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 415 with C or better
BIO	**421**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: You may not enroll in BIO 421 if you have credit for BIO 521; must have BIO 320 with a grade of C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	**426**	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	**427**	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Pre-requisites: A grade of C or better:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**428**	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320 with C or better
BIO	**431**	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 187, and BIO 188 with a grade of C or better
BIO	**435**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite:BIO 331 with a grade of C or better
BIO	**436**	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 331 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit only for MBB 440 or BIO 440
BIO	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
BIO	**450**	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 351 with C or better
BIO	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**455**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**456**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BIO	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: C grade or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188
BIO	**461**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**462**	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**464**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better; Students who have credit in PLB 440, may not enroll in BIO 464
BIO	**465**	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**466**	Neurophysiology Laboratory	Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 465 or BIO 467 (with C or better if completed)
BIO	**467**	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**469**	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 360 with C or better
BIO	**470**	Systematic Zoology	Philosophy, theory, practice of interpreting animal diversity, including species concepts, speciation, nomenclature, and evolutionary and phylogenetic classification emphasizing phylogenetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: C grade or better in BIO 187 (or both PLB 200 and PLB 201) and BIO 188

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BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**472**	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 480 with C or better
BIO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**490**	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 390 with C or better
BIO	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**495**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
BIO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**502**	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**505**	Scanning Electron Microscopy	Theory, use, and methods of preparing biological materials for scanning electron microscopy. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506
BIO	**508**	Scientific Data Presentation	Techniques necessary for presentation of scientific data used in journal publications, grant proposals, and visual presentations. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**515**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
BIO	**516**	Foundations of Bioethics	Advanced introduction to the theoretical and normative foundations of the field of bioethics. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**520**	Biology of the Desert	Factors affecting plant and animal life in the desert regions and adaptations of the organisms to these factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**521**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		You may not enroll in BIO 521 if you have credit for BIO 421
BIO	**522**	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**524**	Ecosystems	Structure and function of terrestrial and aquatic ecosystems, with emphasis on productivity, energetics, biogeochemical cycling, and systems integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**526**	Quantitative Ecology	Sampling strategies, spatial pattern analysis, species diversity, classification, and applications of multivariate techniques to ecology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**529**	Advanced Limnology	Recent literature, developments, methods, and limnological theory; field and lab application to some particular topic in limnology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		

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BIO	**543**	Molecular Genetics	Nature and function of the gene; emphasis on the molecular basis of inheritance and gene expression in procaryotes and eucaryotes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**545**	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**547**	Techniques in Evolutionary Genetics	Practical experience in modern techniques for the study of evolution.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
BIO	**550**	Advanced Cell Biology	Applies contemporary electron microscopic and biochemical/molecular techniques for studying eukaryotic cell functions. Mechanisms of intracellular protein trafficking.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**551**	Biomembranes	Structure and function of biological membranes, emphasizing synthesis, fluidity, exocytosis, endocytosis, and cell responses to hormones and neurotransmitters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**552**	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**561**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**563**	Environmental Physiology	Physiological responses and adaptations of animals to various aspects of the physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**564**	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**610**	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**611**	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: BIO 610 with D or better, or co-enrolled in BIO 610

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
BIO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
BIO	**300**	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG	
BIO	**301**	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. fee Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	**305**	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	Pre-requisites: Minimum Sophomore standing
BIO	**306**	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed ENG101 or ENG105 and BIO181 or BIO188 and BIO182 or BIO187 with a grade of C or greater or be currently enrolled.
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or PBL 200 and PLB 201) and BIO 188 with C or better; CHM 113 and 116 with C or better
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**332**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and qualification of animal behavior and interpretation of behavior within an evolutionary framework. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: BIO 331 or LSC 331 (with C or better if completed)
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better; CHM 113 and CHM 116 with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or MBB 245 or both PLB 200 & PLB 201) and BIO 188 (or MBB 247) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**354**	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better; CHM 116 or CHM 118 with C or better
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
BIO	**443**	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and 188 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 and BIO 188 with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:BIO 187 and BIO 188 with a C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 and BIO 188 with a C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) and BIO 188 with C or better
BIO	**393**	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Life Sciences	1.		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**300**	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BIS in Organizational Studies student; Minimum Sophomore status; ENG 102, 105 or 108 with C or better; Credit is allowed for only BIS 300 or 394 (Introduction to Org Studies)
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**350**	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity. Prerequisites: sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & C	Pre-requisites: Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**370**	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**470**	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; BIS 370 with D or better; senior status; completion of first-year composition
BIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
BIS	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
BIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
BLE	**511**	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**514**	Bilingual/Multicult-Spec Educ	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**515**	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**520**	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**524**	Secondary Sheltered ESL Content Teaching	Teaching and assessing ESL adolescents in the content areas with an emphasis on integrating language acquisition principles with content learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**526**	SEI for Elementary Schools	Prepares elementary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**527**	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**528**	Social Studies for Bilingual/ESLTeachers	Provides language and instructional methodologies and assessment strategies relevant to bilingual/multicultural students in social studies content delivered in Spanish and English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**529**	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**535**	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**537**	Language Structure Aquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Credit is allowed for only BLE 537 or LIN 510
BLE	**541**	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**543**	Bilingual Education Models	Bilingual education programs in other countries; analysis of political, social, economic, and educational implications; practice in planning bilingual education curricula. See also offerings under MCE, SED, SPE, and SPF.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**561**	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Latino/a and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**510**	Foundations of Structured English Immersion	Prepares teachers for linguistically diverse classrooms, including Structured English Immersion knowledge to meet the Augmented Provisional SEI Endorsement: ELL Proficiency Standards, Assessment Objectives, Foundations of SEI and SEI strategies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**578**	Student Teaching in the Elementary School	Supervised teaching in the area of specialization. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**220**	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
BLE	**322**	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**324**	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**335**	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**396**	Field Experience I	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**397**	Field Experience II		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	**400**	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**407**	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**408**	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**411**	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**412**	Mathematics Curriculum, Instruction and Assesment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**413**	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**414-W**	Bilingual/ESL Curriculum and Organization	ESL curriculum content and organization, including program model effectiveness, language assessment and language usage, special needs and parent involvement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**455**	Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings	Examines methods, classroom management strategies, and assessment techniques for social studies instruction in elementary BLE/ESL classes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**470**	Student Teaching Seminar	Concurrent course with the student teaching experience that provides support, content, and critical evaluation opportunities directly related to teaching practices.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**478**	Student Teaching in Diverse Language Classrooms	Student teaching in diverse language classrooms. Focuses on use of English language learning and bilingual strategies; integrates all previous course work. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**479**	Capstone Seminar in Bilingual/ESL Education	Reflective, experience-based integration of theory and practice; professional development for bilingual/ESL teachers.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**481**	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
BLE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
BLE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**496**	Field Experience III	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
BLE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BME	**100**	Introduction to Bioengineering	Introduces profession of bioengineering: bioengineering design process, teaming, computer models in bioengineering, communications skills, career planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Bioengineering and Pre-Med Engineering student; Pre/Co-requisite: ENG 101, 105, or 107 with C or better
BME	**111**	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisite: Engineering student
BME	**112**	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisite: Engineering student
BME	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		

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BME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**200**	Conservation Principles in Bioengineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: CHM 114 or CHM 116 completed with C or better; PHY 131/132 with a C or better; :BIO 188(or BME 111/112) with a C or better; Co-requisite:MAT 275
BME	**202**	Global Awareness within Biomedical Engineering Design	Introduces ethical, legal, social, economic, and technical issues arising from the design and implementation of bioengineering technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L or HU	Pre-requisites: Engineering students OR have a minimum cumulative GPA of 2.50; ENG 102, 105 or 108 completed with a grade of C or greater or be currently enrolled; ECN 111 or ECN 112 AND either ECE 100, 106 or 194 completed with a grade of D or greater
BME	**235**	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering student; BIO 188 (or BME 111 and BME 112) with C or better, CHM 114 or CHM 116 with C or better; Pre/Co-requisite: PHY 131 and PHY 132.
BME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**300**	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE Junior, Senior or Post-Bac; BME 100 with C or better; ENG 102, 105 or 108 with C or better
BME	**318**	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 235 with a C or better
BME	**331**	Bioengineering Transport Phenomena	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 212, MAT 275 (or MAT 274), CHM 341, and BME 200 with C or better
BME	**350**	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS student; EEE 202 with C or better; MAT 274 or MAT 275 with C or better; Pre/Co-requisite: MAT 343
BME	**370**	Microcomputer Applications in Bioengineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 235 with C or better; BME 350 with a C or better
BME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**411**	Biomedical Engineering I	Reviews diagnostic and prosthetic methods using engineering methodology. Introduces transport, metabolic, and autoregulatory processes in the human body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum GPA of 2.50; BME 334 with C or better
BME	**412**	Biomedical Engineering II	Reviews electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement technology, cardiovascular and pulmonary fluid mechanics, and the application of mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum cumulative GPA of 2.50
BME	**413**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; BME 370, BME 235 with C or better
BME	**415**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.0; MAT 274 with a D or better or currently enrolled; PHY 116 or PHY 131 with a D or better or currently enrolled in PHY 131 OR Graduate Engineering student
BME	**416**	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	**417**	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.	L	Pre-requisite: BME 318; BME 331; BME 370; IEE 380; BME 300 with C or better; Pre/Co-requisite: BME 413
BME	**419**	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 350 and BME 370 with C or better
BME	**423**	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.	L	Pre-requisites: BS/BSE Engineering, pre-requisite or co-requisite:BME 413
BME	**434**	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 331 with C or better
BME	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451

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BME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**490**	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 417with C or better
BME	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Pre-requisites: Must be an Honors student
BME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7		Pre-requisite: Bioengineering or Pre-Med Engineering BS or BSE student
BME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**511**	Biomedical Engineering I	Diagnostic and prosthetic methods using engineering methodology. Transport, metabolic, and autoregulatory processes in the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**512**	Biomedical Engineering II	Electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement, technology, cardiovascular and pulmonary fluid mechanics, and mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**513**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**514**	Advanced Biomedical Instrumentation	Principles of applied biophysical measurements using bioelectric and radiological approach.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**515**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**516**	Topics in Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**518**	Introduction to Biomaterials	Topics include structure property relationships for synthetic and natural biomaterials, biocompatibility, and uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**519**	Topics in Biocontrol Systems	Linear and nonlinear control systems analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**520**	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**521**	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**522**	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**523**	Physiological Instrumentation Lab	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate Engineering students only
BME	**524**	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**525**	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Graduate Engineering students only
BME	**532**	Prosthetic and Rehabilitation Engineering	Analysis and critical assessment of design and control strategies for state-of-the-art medical devices used in rehabilitation engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BME	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**551**	Movement Biomechanics	Mechanics applied to the analysis and modeling of physiological movements. Computational modeling of muscles, tendons, joints, and the skeletal system with application to sports and rehabilitation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**566**	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy, and research. Lab experiments using diagnostic radiology, fluoroscopy, ultrasound, and CAT scanning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**568**	Medical Imaging	CT, SPECT, PET, and MRI. 3-D in vivo measurements. Instrument design, physiological modeling, clinical protocols, reconstruction algorithms, and quantitation issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BME	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		
BMI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**501**	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**502**	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**505**	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 502 with a C or better; admission to a graduate program in the School of Computing and Informatics
BMI	**511**	Decision Support and Evidence-Based Practice	Biomedical decision making and the tools and techniques for decision support, including artificial intelligence and machine learning techniques.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		
BMI	**515**	Advanced Biostatistical Methods	Understanding biomedical data; how to use statistical methods and software to correctly analyze biomedical data.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**516**	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**520**	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 505 and BMI 516 with C or better, and admission to any SCI graduate program
BMI	**540**	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**541**	Cognition and Decision Making in Healthcare	Conceptual and methodological issues in cognitive science and medical informatics, including design and use of technology in medical settings.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**555**	Medical Information Management	Database theory and information management systems with applications to biomedical domain, including use of databases in the Web context.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: CSE 412 with D or better, and admission to any SCI graduate program
BMI	**560**	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1.		Pre-requisite: Biomedical Informatics PhD student
BMI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	GNA	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Admission to any SCI graduate program
BMI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Graduate College	Biomedical Informatics Program	1.		
BMI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-4		Pre-requisites: Admission to any SCI graduate program
BMI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-15		
BMI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Biomedical Informatics Program	1-15		
BMI	**101**	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**102**	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 101 with B or better
BMI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BMI	**201**	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GRD	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**211**	Modeling Biomedical Decisions	First semester of a three-emester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**221**	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**301**	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**311**	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		

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BMI	**312**	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**330**	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**332**	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**461**	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**462**	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**465**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**466**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BMI	**482**	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**483**	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 482 with C or better
BMI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BUA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**300**	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	1.		
BUA	**330**	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		
BUA	**380**	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**381**	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.

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BUA	**382**	Small Business Sales and Market Development	Building and maintaining customers, developing a market identity and a niche, and the importance of sales.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with min 2.00 ASU Cum GPA, OR Graduate student; must not have previously earned credit in MKT 395.
BUA	**383**	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**384**	Small Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**440**	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 441 with a C or better.
BUA	**441**	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 440 with a C or better.
BUA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Faculty of Business Administration	1-6	L	Pre-requisites: Must be an Honors student
BUA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-7		
BUA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-12		
BUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
BUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
BUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**502**	Organization and Management of Cooperative Programs	Work-study programs for business occupations in high schools and community colleges.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BUE	**480**	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**481**	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
BUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		
BUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
BUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
CBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	**520**	Modeling and Computational Biology	Key mathematical and computational techniques for bioinformatics. Numerical and visualization software; scripting, database management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**521**	Applications and Complex Problem Solving in Computational Biology	Continuation of CBS 520. Key mathematical concepts. Team solution of bioinformatics applications, project writing, and presentation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisite: CBS 520 with B or better
CBS	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CBS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
CBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
CCS	**300**	Chicana and Chicano Culture and Society	Intensive analysis of how Mexican American writers, artists, film makers, entertainers, and academicians have interpreted aspects of the Chicana and Chicano experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
CCS	**446**	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of Chicana and Chicano Studies content into elementary and secondary curriculum; designed for teachers who work with Chicana and Chicano students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
CDE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
CDE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**338**	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	2-4		
CDE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**430**	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
CDE	**437**	Infant Family Assessment and Observation	Examines strategies for implementing developmental assessments and observations of young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
CDE	**444**	Risk and Variation in Child Development	Impact that constitutional and environmental risk factors have on young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
CDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
CDE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
CDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
CDE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**531**	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**533**	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**534**	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: CDE 531; FAS 500

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	**570**	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**571**	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**572**	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**573**	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**574**	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**575**	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**576**	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
CDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**610**	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**612**	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: CDE 531 with C or better
CDE	**634**	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Prerequisite: CDE 534
CDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
CDE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	THE	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
CDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
CED	**111**	Exploration of Education	Education as an instrument in the development of the individual and society, and its significance as an American institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
CED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**250**	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
CED	**294**	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
CED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
CED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**512**	Introduction to Helping Relationships	Introduces the skills used in the helping professions and examines the settings in which they occur.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**522**	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**523**	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**525**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COE 501
CED	**527**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**528**	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**534**	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	**545**	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**567**	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**577**	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling Psychology MC or PhD student
CED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**655**	Student Development Programs in Higher Education	Emerging conceptual models of student development. Overview of student personnel and student affairs programs in community colleges, four-year colleges, and universities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: must be a graduate student (non-degree or degree seeking)
CED	**672**	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	**100**	Introduction to Civil and Environmental Engineering	Introduces basics of civil and environmental engineering design, team work, ethics, communication and management skills, modeling, problem solving, computer applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		Pre-requisites: Civil Engineering students only
CEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**210**	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better
CEE	**212**	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 and MAT 275 (or MAT 274) completed with C or better
CEE	**213**	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 (or CEE 211) with C or better; MAT 274 (or MAT 275) with C or better
CEE	**281**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**300**	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	L	Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**312**	Engrg Materials		N	LEC	N	CNV	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		
CEE	**321**	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) with C or better; CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	**341**	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) and CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (C or better if completed)
CEE	**351**	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better

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CEE	**353**	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**361**	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 213 with a C or better; CHM 114 or CHM 116 with a D or better; Pre- or Co-requisite: IEE 380 with D or better if completed
CEE	**372**	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	CS	Pre-requisites: Engineering BSE students; MAT 274 or MAT 275 & MAT 267 or MAT 272 (grade of C or better); MAT 267 or MAT 272 may be taken as a co-requisite. Credit for only CEE 384 or MAE 384
CEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**400**	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	(L or HU) & H	Pre-requisites: Civil and Environmental Engineering BS or BSE student; CEE 300 with C or better OR Non-CEE Juniors or Seniors
CEE	**412**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 412 or 511.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; completed CEE 351 and CEE 353 with a grade of C or greater
CEE	**420**	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**421**	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**423**	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	**432**	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	**440**	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Engineering BS/BSE student; CEE 341 or MAE 340 with C or better
CEE	**441**	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	**452**	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 with C or better
CEE	**462**	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	**466**	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	**467**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 467 or 567. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or MIC 220 with a grade of C or greater
CEE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or CHE 334 with a C or greater
CEE	**474**	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	**475**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	**481**	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better
CEE	**483**	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**486**	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.	L	Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 321 and CEE 341 and CEE 351 and CEE 361 and CEE 372 with a grade of C or better

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CEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Pre-requisites: Honors students only
CEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisites: Engineering Honors students only
CEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**511**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 511 or 412.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Graduate Civil Engineering students only
CEE	**512**	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**513**	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**514**	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**515**	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate tudent
CEE	**516**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**521**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**522**	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**524**	Advanced Steel Structures	Strength properties of steel and their effects on structural behavior. Elastic design of steel structures. Plastic analysis and design of beams, frames, and bents. Plastic deflections. Plastic design requirements. Multistory buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**526**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisite: Engineering CEE Graduate student
CEE	**527**	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**530**	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**532**	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532

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CEE	**533**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**536**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**537**	Topics in Structural Engineering	Advanced topics, including nonlinear structural analysis, experimental stress analysis, advanced finite elements, plasticity and viscoelesticity, composites, and damage mechanics.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisites: Engineering CEE Graduate Students Only
CEE	**540**	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**541**	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**543**	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**544**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		You may not enroll in CEE 544 if you have credit in SOS 551
CEE	**546**	Free Surface Hydraulics	Derivation of 1-D equations used in open channel flow analysis; computations for uniform and nonuniform flows, unsteady flow, and flood routing. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**547**	Principles of River Engineering	Uses of rivers, study of watershed, and channel processes. Sediment sources, yield, and control; hydrologic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**548**	Sedimentation Engineering	Introduces the transportation of granular sedimentary materials by moving fluids. Degradation, aggregation, and local scour in alluvial channels. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**550**	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**551**	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**553**	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**554**	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**555**	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**556**	Seepage and Earth Dams	Transient and steady-state fluid flow through soil, confined and unconfined flow, pore water pressures, and application to earth dams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**557**	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**558**	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**559**	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**560**	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**561**	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**562**	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**563**	Environmental Chemistry Laboratory	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student

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CEE	**564**	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**566**	Industrial/Hazardous Waste Treatment	Emphasizes treatment of local industrial/hazardous waste problems, including solvent recovery and metals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**567**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 567 or 467.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**568**	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CEE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**573**	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**574**	Highway Capacity	Highway capacity for all functional classes of highways. Traffic signalization, including traffic studies, warrants, cycle length, timing, phasing, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**576**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**581**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	**582**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering MS or MSE student
CEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student

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CEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering PhD student
CEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CHE	**100**	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2.		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**211**	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHM 116 with C or better; MAT 266 or MAT 271 with C or better
CHE	**231**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 231 or 501.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHE 211 with C or better; MAT 266 or MAT 271 with a C or better
CHE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**334**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 334 or 502.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 231 or 331 with C or better
CHE	**342**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 342 or 504.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 211 or CHE 311 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed) Credit allowed for only CHE 342 or CHE 504
CHE	**352**	Transport Laboratories	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: BS/BSE Engineering students
CHE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**432**	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with a C or better OR Graduate Engineering student
CHE	**433**	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with C or better
CHE	**442**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 442 or 505.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE students; CHE 334 and CHE 342 with a C or better OR Graduate Engineering students
CHE	**451**	Chemical Engineering Laboratory	Operation, control, and design of experimental and industrial process equipment; independent research projects. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 334 with C or better; CHE 342 with C or better; MAE 384 (or ECE 384) with C or better OR Graduate Engineering students

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CHE	**458**	Semiconductor Material Processing	Introduces the processing and characterization of electronic materials for semiconductor applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE student; CHE 334 and CHE 342 with C or better OR Graduate Engineering student
CHE	**461**	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	CS	Pre-requisites: Engineering BS or BSE student; MAT 274 or MAT 275 with C or better; MAE 384 or CEE 384 with a C or better OR Graduate Engineering student
CHE	**462**	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; CHE 432, CHE 442 and CHE 433 with C or better OR Graduate Engineering student
CHE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 469 or 569.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**474**	Chemical Engineering Design for the Environment	Conflict of processing materials and preserving the natural resources. Teaches students to understand and value the environment and attempt to control our impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 334 and CHE 342 with a grade of C or better
CHE	**475**	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisite: Engineering BSE student
CHE	**476**	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**477**	Bioseparation Processes	Principles of separation of biologically active chemicals; the application, scale-up, and design of separation processes in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with a minimum GPA of 3.00 OR Graduate Engineering student
CHE	**478**	Industrial Water Quality Engineering	Chemical treatment processing, quality criteria and control, system design, and water pollutants.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 231 or CHE 331 with a grade of C or greater; Seniors only
CHE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**490**	Chemical Engineering Projects	Individual projects in chemical engineering operations and design.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-5		Pre-requisite: Engineering BSE student
CHE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Pre-requisites: Honors students only
CHE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**501**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 501 or 231.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**502**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 502 or 334.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**504**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 504 or 342.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Students who have credit for CHE 342, may not enroll in CHE 504
CHE	**505**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 505 or 442.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in MSE 518, EEE 518, or MSE 475 you may not enroll in CHE 518
CHE	**527**	Advanced Applied Mathematical Analysis in Chemical Engineering	Formulation and solution of complex mathematical relationships resulting from the description of physical problems in mass, energy, and momentum transfer and chemical kinetics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**536**	Convective Mass Transfer	Turbulent flow for multicomponent systems, including chemical reactions with applications in separations and air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**552**	Industrial Water Quality Engineering	Water pollutants, quality criteria and control, chemical treatment processing, and system design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**553**	Air Quality Control	Air pollutant origins, effects, and control. Physical and chemical processes, including dispersion, combustion, sampling, control equipment design, and special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**561**	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	**101**	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
CHI	**102**	First-Year Chinese II	See CHI 101. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:Must have completed CHI 101 with a grade of D or better or be currently enrolled
CHI	**120**	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	
CHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**201**	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 102 with a grade of D or better or currently enrolled
CHI	**202**	Second-Year Chinese II	See CHI 201. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 201 with a grade of D or better or currenlty enrolled
CHI	**205**	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**301**	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 202 with a grade of C or better or currently enrolled
CHI	**302**	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 301 with a grade of C or better or currently enrolled
CHI	**307**	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 302, or JPN 202, or KOR 202 with a grade of C or better or currently enrolled
CHI	**308**	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 307 with a grade of C or better, or currently enrolled
CHI	**309**	Chinese Conversation	Aural/oral drills using contemporary stories, articles, and essays. For students with lower-level proficiency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:Must have completed CHI 202 with a grade of D or better or currently enrolled
CHI	**310**	Chinese Conversation	See CHI 309.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**311**	Chinese Conversation	Intensive aural/oral practice in modern Chinese. For students who have lived in China or a Chinese-speaking environment.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		
CHI	**312**	Chinese Conversation	See CHI 311.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**321**	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
CHI	**322**	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
CHI	**345**	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**380**	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**401**	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with C or better

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CHI	**402**	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 401 with C or better
CHI	**407**	Chinese for Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 402 with a C or better
CHI	**408**	Chinese for Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 407 with C or better
CHI	**430**	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	**450**	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianti wen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 with a grade of C or better
CHI	**461**	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuanqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 and CHI 307 with a grade of C or better
CHI	**462**	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisties: CHI 302, and CHI 308
CHI	**470**	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with a grade of C or better
CHI	**482**	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites; CHI 302 and CHI 308
CHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
CHI	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
CHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**514**	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**520**	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, economics, or other fields.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**543**	Chinese Language and Linguistics	Analysis and discussion, within the framework of linguistic theory, of selected problems in Chinese phonetics, morphology, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**561**	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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CHI	**585**	Problems of Translation	Theories and practice of translation: strategies for handling a variety of Chinese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**684**	Internship		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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CHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: Students who have credit for CHM 107, may not enroll in CHM 101
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ & G	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**111**	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisite: Biochemistry or Chemistry major; CHM 117 with C or better if completed
CHM	**112**	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre-requisites: Biochemistry or Chemistry major; CHM 111 with C or better; Pre/Co-requisite: CHM 118 with C or better if completed
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**114**	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**117**	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: Chemistry or Biochemistry majors; CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre-or Co-requisite: MAT 170 (or 210, 251, 265 or 270 (with C or better if completed); Credit for CHM 113 or 117 only
CHM	**118**	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 117 with C or better; Chemistry and Biochemistry majors only
CHM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
CHM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)

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CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**240**	Introduction to Physical Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	CS	Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**302**	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	**303**	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisites: CHM 325 with C or better if completed
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**333**	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds. Credit is allowed for only CHM 333 or 231 or 233.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Must be a Biochemistry or Chemistry student; CHM 116 or 118 with C or better
CHM	**334**	Organic Chemistry for Majors II	Continuation of CHM 333. Credit is allowed for only CHM 334 or 234.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Biochemistry or Chemistry student; CHM 333 with a C or better
CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**337**	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions. Credit is allowed for only CHM 337 or 237. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; Pre- or Co-requisite: CHM 333 (with C or better if completed)
CHM	**338**	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337. Credit is allowed for only CHM 338 or 238. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; CHM 337 with C or better; Pre or Co-requisites: CHM 334
CHM	**341**	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114, 116 or 118 with C or better; CHM 231, 233 or 333 with C or better; MAT 210, 251, 265 or 270 with C or better; PHY 101, 112 or 131 with C or better.
CHM	**343**	Physical Chemistry Laboratory	Physical chemistry experiments. Credit is allowed for only CHM 343 or both CHM 348 and 349. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 341 with C or better or co-enrolled in CHM 341
CHM	**345**	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Prerequisites: CHM 240 with C or better or both MAT 272 and 274 with C or better
CHM	**346**	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 345 with C or better
CHM	**348**	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. fee. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	**349**	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**424**	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	**433**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	**434**	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 433 or CHM 531 with C or better

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CHM	**435**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 361 (or BCH 461), BIO 353 and CHM 234 (or CHM 334) with a C or better; You may not enroll in CHM 435 if you have credit for CHM 535
CHM	**452**	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-2	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	**453**	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**460**	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	**471**	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341(or 346) or GLG 321 with C or better
CHM	**483**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Barrett Honors College students only
CHM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**501**	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**521**	Chemometrics	Overview of chemometric tools in analytical chemistry, including multivariate calibration, spectral deconvolution, and experimental design.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**523**	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**524**	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**525**	Analytical Spectroscopy	Theoretical and practical considerations involving the use of optical instruments for chemical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		
CHM	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
CHM	**531**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 433 or CHM 531
CHM	**532**	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		

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CHM	**535**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Students may not enroll in CHM 535 who have credit in CHM 435
CHM	**537**	Organic Reactions	Organic synthetic methodologies and important synthetic reactions emphasizing recently discovered reactions of preparative value. Protection/deprotection synthetic strategies; peptide synthesis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**541**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 541 or MSE 524
CHM	**543**	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry. Covers electronic structure methods and computer simulation techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM, NAN or PHY 544
CHM	**545**	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**546**	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**548**	Chemical Kinetics and Dynamics	Experimental and theoretical aspects of time-dependent processes in chemistry. Topics include kinetics of chemical reactions, diffusion, and relaxation phenomena in ordered and disordered materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**549**	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**552**	Advanced Inorganic and Materials Synthesis Laboratory	Preparation and characterization of inorganic compounds and materials, emphasizing advanced methods and techniques of importance in inorganic and materials chemistry. Schlenk-line and glovebox manipulations, solvothermal syntheses, and gas-phase reactions.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		
CHM	**553**	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**571**	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**579**	Topics in Inorganic and Materials Chemistry		N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**582**	Topics in Geochemistry and Cosmochemistry	Topics of current interest for students in chemistry and other fields. Sampling of data and thought concerning phase equilibria, element distribution, meteorites, the Earth, and other planets.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		
CHM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	2.		Pre/Co-requisite: CHM 327 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ & G	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CHP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
CHP	**501**	Community Health Assessment and Analysis	Provides theory and practice in community assessment and analysis applicable to community health practice.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Nursing) or Nursing (Comm Health Adv Prac) student; CHP 500 with B or better; Co-requisite: NUR 581
CHP	**502**	Community Health Program Planning and Evaluation	Utilizes planning and evaluation theory in planning programs to meet identified health needs of communities.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Adv Prac) student; CHP 501 with B or better
CHP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
CIM	**105**	Introduction to the Concrete Industry	Overview of the history, career opportunities, job functions, and professional organizations in the concrete industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIM	**106**	Fundamentals of Concrete: Properties and Testing	Examines effects of concrete-making materials on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: CIM 105 with C or better; Co-requisite: STP 226
CIM	**205**	Concrete Construction Methods	Forming, shoring, placing and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for foundations and other structural members.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 106 with C or better; CON 252
CIM	**206**	Application of Concrete in Construction	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 205 with C or better; CON 243 with C or better
CIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	**305**	Management of Concrete Products: Ordering and Delivering	Basic understanding of managing the order and delivery process common to all concrete products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better; CON 221 with C or better
CIM	**306**	Management of Concrete Products: Production Facilities	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 305 and CON 251 with C or better; CON 271
CIM	**405**	Concrete Problems: Diagnosis, Prevention, and Dispute	Diagnose and prevent problems related to concrete production, testing, construction, and performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better
CIM	**406**	Concrete Industry Management Capstone	Intensive study of a problem appropriate to the major and the student's career interests. Lecture, student presentations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS student; CIM 405 with C or better; COM 225
CIM	**420**	Senior Concrete Lab	Reintroduces fundamental lab procedures as well as advanced testing methods. Collect data, search for literature, analyze and report on conclusions.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Contruction BS student; CIM 405 with C or better
CIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIS	**105**	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	
CIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	**220**	Programming Concepts for Accountancy Majors	Introduces business computer programming. Uses programming languages such as Visual BASIC to teach proper programming style and practice. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		
CIS	**235**	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	**236**	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	Pre-requisites: Must be an Honors student
CIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	**300**	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	**335**	Visual Paradigms for Information Systems Development	Uses visual programming languages such as Visual BASIC to implement data structures, file structures, and interfaces in business information systems. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey ACC BS student having completed CIS 220 OR CIS BS student having completed CSE 100, AND ACC 241 AND ECN 221 with a grade of C or greater
CIS	**340**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C#. Fee.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: Must be W. P. Carey CIS BS student; AND must have completed ACC 241 or ACC 271, CIS 235 or CIS 236, CSE 181 or CSE 182, and ECN 221 with a C or greater
CIS	**360**	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey Accountancy BS student, and CIS 105 or CIS 220 or 236, ACC 231 or 261, and ACC 241 or 271 with a grade of C or better; OR W. P. Carey Computer Information Systems BS student, and CIS 235 or 236 with a grade of C or better.
CIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
CIS	**425**	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 with C or better
CIS	**430**	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as.NET and networked UNIX. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360

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CIS	**440**	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.	L	Pre-requisites: W.P. Carey Computer Information Systems BS student; CIS 360 and CIS 430 with C or better
CIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Pre-requisites: Must be an Honors student
CIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W.P. Carey ACC BS or CIS BS student
CIS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Pre-requisites: W.P. Carey CIS BS student
CIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student
CIS	**502**	Information Systems	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: W.P.Carey MBA student
CIS	**505**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems, abstract data types and object-oriented programming using a visual language.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey graduate students only
CIS	**506**	Business Database Systems	Hierarchical, network, relational, and other recent data models for database systems. Processing issues such as concurrency control, query optimization, and distributed processing.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**512**	Intelligent Decision Systems and Knowledge Management	Definition, description, construction, and evaluation of computer-based decision systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**515**	Management Information Systems	Systems theory concepts applied to the collection, retention, and dissemination of information for management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**520**	Systems Design and Evaluation	Methodologies of systems analysis and design. Issues include project management, interface, organizational requirements, constraints, documentation, implementation, control, and performance evaluation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**530**	Information Systems Development	Object-oriented and interprocess communication and control concepts for information systems; applications based on languages such as C++ and platforms such as networked UNIX.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**535**	Distributed and Mixed-Media Information Systems	Modern communications protocols for wireless and mobile computing, overview of network and distributed database management systems, overview of storage and multimedia delivery issues, and shared virtual reality technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		
CIS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		
CLS	**100**	Introduction to Clinical Laboratory Sciences	Introduces the field of clinical laboratory sciences. Required for Clinical Laboratory Sciences majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
CLS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CLS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
CLS	**310**	Principles of Clinical Chemistry I	Theory and application of principles of clinical chemistry, with emphasis on lab techniques, pathophysiology, methods of analysis, and assessment of procedure. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**320**	Principles of Clinical Microbiology I	Theory and application of principles of clinical microbiology with emphasis on isolation and identification of medically significant fungi and bacteria. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CLS	**330**	Principles of Clinical Hematology I/Body Fluids	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**410**	Principles of Clinical Chemistry II	Continuation of CLS 310 with emphasis on principles of advanced clinical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**411**	Advanced Applications of Clinical Chemistry	Clinical application of theory/techniques from CLS 310 and 410. Emphasizes operation of common lab instrumentation and clinical correlation. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**420**	Principles of Clinical Microbiology II	Disease mechanisms and identification of medically significant parasites, Mycobacteria, Actinomycetes, Chlamydia, Rickettsia, Mycoplasma, and viruses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**421**	Advanced Applications of Clinical Microbiology	Practical lab application of the principles of specimen collection, processing, detection, identification, and antimicrobial testing of medically significant bacteria, fungi, and parasites. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**430**	Principles of Clinical Hematology II/Hemostasis	Theory and applications of principles in hematology with emphasis on etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**431**	Advanced Applications of Clinical Hematology	Practical lab application of methods/techniques used to evaluate and diagnose blood dyscrasias/hemostatic defects. Applied techniques in body fluid analysis. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**440**	Principles of Clinical Immunology/Immunohematology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**441**	Advanced Applications of Clinical Immunology/Immunohematology	Practical lab application of the principles of serological methods used in diagnosing disease and selecting blood components for transfusion therapy. Minimum 135 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**450**	Principles of Clinical Laboratory Administration	Principles of management, emphasizing the clinical lab. Basic management process, personnel supervision, identification, and allocation of resources. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	
CLS	**460**	Principles of Clinical Laboratory Education	Principles of learning, with application to the development of instructional objectives, strategies, and evaluation for teaching-learning situations in the lab. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	
CLS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
CMN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
CMN	**502**	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**505**	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**506**	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**515**	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**516**	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**520**	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**522**	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**531**	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**532**	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**550**	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**551**	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better

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CMN	**557**	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**565**	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**570**	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not adressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
CMN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: Communication Studies Master of Arts student
CMN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisite: Communication Studies Master of Arts student
CMN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
COE	**501**	Introduction to Research and Evaluaton in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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COE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**271**	Voice Improvement	Intensive personal and group experience to improve normal vocal usage, including articulation and pronunciation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**281**	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**298**	Honors Directed Study		N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honor student

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COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**323**	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	C	Pre-requisites: Must have a minimum cumulative GPA of 2.50; Must have completed COM 100 with a grade of C or greater
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**326**	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**341**	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**344**	Performance of Oral Traditions	Cultural beliefs and values studied through ethnographic research and performance of personal narratives, folklore, myths, legends, and other oral traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**404**	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**407**	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA of greater than or equal to 2.50; Must have completed COM 308 with a grade of C or greater
COM	**408**	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA greater than or equal to 2.50; Must have completed COM 308 with a C or better. Credit given for COM 408 or 508 only
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**426**	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**441**	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	**442**	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	**445**	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	**446**	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications students only and have completed 56 or more hours; Minimum cumulative GPA of 2.50; COM 225 and COM 308 with a C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisites: Must have a minimum cumulative GPA of 2.50
COM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**501**	Research Methods in Communication	Critical analysis of systems of inquiry in communication, focusing on the identification of variables and approaches to conducting research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**504**	Theories and Models in Communication	Theory construction, metatheoretical concerns, models, construct definition, and comparative analysis of current theories in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**508**	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**509**	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must be a Graduate Communications student
COM	**521**	Rhetorical Criticism of Public Discourse	History and significance of rhetorical theory and criticism in the analysis of public discourse.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**604**	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**607**	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**608**	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**609**	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		
COM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**124**	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	C	
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-req 25 minimum hours
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**309**	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**324**	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**353**	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**416**	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**417**	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**422**	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: Must be a Junior and have a GPA of 2.0 or greater, AND completed ENG 101 or 105 with a grade of C or greater
COM	**424**	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**429**	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**451**	Employee Participation Processes in Organizations	Communication principles and practices associated with employee empowerment, team-based organizing, and similar employee involvement processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 308 or COM 309 with C or better; minimum GPA of 2.0
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**454**	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**457**	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**471**	International Communication	Explores the political, economic, sociocultural, and communicative dimensions of mediated communication across borders and the processes of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	Pre-requisites: Minimum 2.0 GPA; CMN 463 or COM 463 with C or better
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Communication studies major or Public Relations and Strategic Communication minor students; minimum 56 hours; minimum cumulative GPA of 2.80; COM 225 (CMN 225) with C or better; COM 308 or COM 309 with C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
CON	**100**	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CON	**101**	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	HU & H & G	
CON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**221**	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: PHY 111 and PHY 113 and MAT 265 (or MAT 270) with C or better
CON	**223**	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 221 with C or better
CON	**241**	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**243**	Heavy Construction Equipment, Methods, and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**251**	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**252**	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**271**	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CON 252 with D or better; CON 243 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	**273**	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**296**	Field Internship	Participation as interns on construction projects to observe and experience the daily activities. fee	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Construction students only
CON	**301**	Megaprojects and Their Impacts on Society	World survey of construction megaprojects and their impacts on the environment, technology, local and global economies, and local culture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**302**	Construction Workforce Issues	Examines issues and forces that have shaped today's construction workforce, including relations among gender, racial, ethnic, and class groups.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**310**	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 221 with C or better; CON 223 with C or bettter
CON	**341**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**345**	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; PHY 111 (or PHY 121) with C or better; PHY 113 (or PHY 122) with C or better; CON 221 with C or better; CON 252
CON	**377**	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	**383**	Construction Estimating	Analyzes construction drawings and specifications. Methods used in estimating process. Quantity surveying techniques for CSI divisions. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS or Housing & Urban Development BSD students; CON 243 and CON 221 with a C or better; CON 252 with a D or better
CON	**389**	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students; CON 221 with C or better; CON 251 with D or better
CON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	**424**	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering Construction BS students; CON 223 with C or better; Pre or Co-requisites: CON 310 (with C or better if completed)
CON	**446**	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: COM 225; CON 221 with C or better
CON	**450**	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS students only; Must have completed CON 310 with a grade of D or greater or be currently enrolled
CON	**453**	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 271, or CON 371; CON 383 with C or better; Co-requisite: CON 495
CON	**455**	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 495 and CON 453 with C or better
CON	**468**	Mechanical and Electrical Estimating	Analysis and organization of performing a cost estimate for both mechanical and electrical construction projects. Computer usage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 273; CON 345 and CON 383 with C or better
CON	**471**	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Prerequisite: Construction BS student; CON 453 with C or better
CON	**472**	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	**477**	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	**483**	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 383 with C or better
CON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Construction BS students; Must have completed CON296 with D or better or currently enrolled
CON	**486**	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites:Construction BS Student; Must have a C or better in CON 383
CON	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		
CON	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Pre-requisites: Must be an Honors student
CON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		

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CON	**495**	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students only; Must have completed CON 383 and CON 389 with a grade of C or better
CON	**496**	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisites Engineering CON BS students; Must have completed COM 225 with a D or better, and CON 453 with a C or better
CON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**501**	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**533**	Strategies of Estimating and Bidding	Explores advanced concepts of the estimating process, such as modeling and statistical analysis, to improve bid accuracies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction graduate student
CON	**540**	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**543**	Construction Equipment Engineering	Analyzes heavy construction equipment productivity using case studies. Applies engineering fundamentals to the planning, selection, and utilization of equipment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction MS students
CON	**545**	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**547**	Strategic Planning	Business planning process of the construction enterprise. Differences between publicly held and closely held businesses and their exposure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**551**	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**554**	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**561**	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering Graduate student
CON	**563**	Facility Management Fundamentals	Operations and maintenance, environmental issues, computerized management and maintenance systems, strategic planning, asset management, construction and design, and LEED/LEED-EB.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**565**	Information Measurement Theory I	Simplistic, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**567**	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**570**	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor¿s viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**571**	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 570 with C or better
CON	**575**	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**589**	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering MS, MSE or PHD student
CON	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1.		
CON	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Construction graduate student
CON	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**700**	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		
CON	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**111**	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**211**	Game Development II	Introduces multiplayer games, artificial intelligence, and tile-based worlds using Macromedia Flash. Uses ActionScript tool to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate student or BIS student with Computer Gaming emphasis; CPI 111 with C or better
CPI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**311**	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with a C or better
CPI	**321**	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with C or better
CPI	**360**	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 200 with C or better
CPI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**400**	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	**411**	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**412**	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPI	**421**	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**422**	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems. Credit is allowed for only CPI 430 or ASB 430.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: CPI 200 with C or better; AML 100 or MAT 142, 170, 210, 265 or MAT 270 with C or better or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; Credit is allowed for only ASB 430, AML 330 or CPI 430

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CPI	**441**	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 411, CPI 412, CPI 421, CPI 422 or DCI 451 with C or better
CPI	**470**	Application of Modeling and Visualization	Applies modeling, computing, and visualization techniques to real data; presents results in a meaningful visual environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1.		Pre-requisite: CPI 400
CPI	**480**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
CPI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1.		
CPI	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Pre-requisites: Must be an Honors student
CPI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**613**	Child Counseling	Applies counseling theory in working with children in clinics and elementary schools. Integrated practicum available with instructor approval.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**622**	Group Counseling	Theories and methodologies used in group counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY622
CPY	**623**	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**634**	Organizational Development and Planned Change	Organizational/individual dynamics, including theory, analysis, techniques, and consultation/intervention strategies used in organizational development.	N	PRA	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Technology and Innovation or Fulton Engineering Graduate student

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CPY	**644**	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577
CPY	**645**	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**650**	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 522
CPY	**651**	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 523
CPY	**660**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	**667**	Patterns of Behavior Disorders	Etiology and treatment of a variety of psychological problems, particularly those represented in DSM III-R.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY667
CPY	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	**670**	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**671**	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**672**	Human Diversity: Social Psychological Perspectives	Implications for psychological practice of social, psychological, and biological factors in the development of behavioral differences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**674**	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**675**	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	**676**	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**677**	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	**678**	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**679**	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**694**	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**701**	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**702**	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: COE 502
CPY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	**610**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**620**	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
CRD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-15		
CRD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-15		
CRJ	**100**	The Justice System	Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	
CRJ	**230**	Introduction to Policing	Introduces policing in the United States covering the history of police, contemporary police work, and problems in policing.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**240**	Introduction to Corrections	Introduces the structure and function of the corrections system from historical and contemporary perspectives.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**302**	Research Methods	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Also stresses methods for conducting research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Must have completed CRJ 100, or 301, JUS 100, or 105, or 305 with a grade of C or greater; or be currently enrolled in any one of these
CRJ	**303**	Statistical Analysis	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the administration of justice area.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	CS	Pre-requisites: MAT 114, 117, 119, 142, 170 or 210 with C or better; CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**304**	Criminology	Provides a basic overview of the nature, the causes and consequences, and the theories of criminal behavior.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**305**	Women, Crime, and Justice	Studies women as offenders, victims, and professionals in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**306**	Race, Ethnicity, and Justice	Studies minority issues in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**314**	Innovations in Policing	Examines current theories and research findings that guide police work, and the practical implications of evaluation within police departments.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better or currently enrolled; CRJ 230 (AJS 230) with C or better or currently enrolled

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CRJ	**315**	Police Organization and Management	Provides a thorough understanding of the structure, processes, and behavior of police organizations.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better; CRJ 230 (AJS 230) with C or better
CRJ	**320**	The Adjudication Function	History and development of courts, trial by jury, and other dispute resolution mechanisms; selection and removal of judges and juries; organization, structure, and jurisdiction of courts; trial and nontrial processes of the judiciary.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:Must have completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or be currently enrolled, or co-enrolled in either of these courses
CRJ	**340**	Juvenile Justice	Critical examination of the history and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**350**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled, or co-enrolled in either of these courses
CRJ	**360**	Substantive Criminal Law	Criminal liability. Crimes against persons, property, and society. Governmental sanctions of individual conduct as formulated by legislatures and the courts.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**410**	Procedural Criminal Law	The criminal process. Constitutional and legal problems associated with arrest, search and seizure, and due process of law.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled
CRJ	**420**	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater,
CRJ	**441**	Prevention of Crime and Delinquent Behavior	Theories of prevention, individual, group, and community approaches: intervention at appropriate stages; contemporary law enforcement, and corrections practices.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled.
CRJ	**442**	Community Relations in the Justice System	Focuses on developing an informed plan and policy for incorporating research findings about the surrounding community within various justice services and agencies. Topics include social stratification, minority groups, and victimology.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: AJS 100, CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**443**	Probation and Community Corrections	Examines the probation and parole functions as well as the numerous and diverse types of community corrections programs.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100,or 301,or CRJ 100,or 301,or JUS 100,or 105,or 305 with a C or greater or be currently enrolled in one;and completed AJS 240,or CRJ 240 with a C or greater or be currently enrolled in CRJ 240.
CRJ	**461**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: Junior or senior standing
CRJ	**462**	Gangs	Critical examination of the history and development of gangs, including criminal justice system responses to gangs and gang-related behaviors.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these.
CRJ	**463**	Occupational Crime	Overview of major issues in business, professional, and official rule violations. Includes consumer fraud, securities violations, unethical professionalism, and political corruption.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better
CRJ	**464**	Organized Crime	The nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled.
CRJ	**470**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	L or SB	Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or enrolled in; and completed ENG 101or 105 with a C or greater
CRJ	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		
CRJ	**485**	Student Assessment	Students may attend a mid-semester information session on the assessment process. At the end of the semester, students take part in a standardized examination and self-administered survey. Y/E grade only. Students must register for this class their final semester.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	0.		
CRJ	**492**	Honors Directed Study		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6		
CRJ	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6	L	Pre-requisites: Must be an Honors student
CRJ	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisites: Junior or Senior
CRJ	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-3		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these

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CRJ	**501**	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**502**	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**503**	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**504**	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**505**	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**510**	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**511**	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**512**	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**513**	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**514**	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**515**	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**516**	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**517**	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**518**	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**519**	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**520**	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**521**	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**522**	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**524**	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**525**	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**534**	Program Evaluation in Criminal Justice	Covers methods of program evaluation, principles of research design, and evaluation tools and resources.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Criminology and Criminal Justice	1.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**601**	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**602**	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**603**	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**604**	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**605**	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**606**	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**607**	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**608**	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**609**	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**610**	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**611**	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**612**	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	**613**	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**101**	Introduction to Computer Science and Engineering	Introduces topics in computer science and computer engineering; familiarization with CSE curriculum subdisciplines and topics. Design of computer software and systems, exploring and experimenting with systems, teamwork, professional opportunities, computer models and programming, communication. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	2.		
CSE	**110**	Principles of Programming with Java	Concepts of problem solving using Java, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**182**	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**183**	Success in Computer Science and Engineering Programs	Overview of the computer science and computer systems engineering fields as well as academic success tips for students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**205**	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	Pre-requisites: CSE 100 or 110 with C or better or currently enrolled
CSE	**220**	Programming for Computer Engineering	Introduces procedure programming languages (C/C++) and hardware descriptive language (VHDL). fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites:Computer Science & Engineer PRE or BSE; Must have received a C or greater in CSE 120 or EEE 120 AND CSE 205 or CSE 210
CSE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: CSE 120 or EEE 120 with C or better; CSE 100, CSE 110 or CSE 200 with C or better OR Computer Science & Engr Graduate student; Credit for CSE 230 or CSE 330 only
CSE	**240**	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: CSE 205 with C or better
CSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		
CSE	**301**	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Computer Science & Engineering BS/BSE student; CSE 205 with C or better
CSE	**310**	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engineering BSE, Computer Science BS, Computational Math Sciences BS or Biomedical Informatics BS student; CSE 205 with C or better; MAT 243 with C or better (CMS students may substitute MAT 300) or CSE Graduate students
CSE	**320**	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better; Credit for CSE 320 or CSE 422 only
CSE	**325**	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better or currently enrolled; CSE 230 or EEE 230 with C or better or currently enrolled; Credit for CSE 325 or CSE 421 only

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CSE	**340**	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE Graduate students
CSE	**355**	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Syst Engr BSE or Computer Science BS students and have received a C or greater in CSE 310 OR CSE Graduate students
CSE	**360**	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS students and have received a C or greater in CSE 220 or CSE 240 OR CSE Graduate students; or BMI BS (ESBMIBS) students and have received a C or greater in CSE 310
CSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**408**	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS students CSE 310 with C or better
CSE	**412**	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: - Computer Systems Engr BSE, Computer Science BS student, or Biomedical Informatics student; CSE 310 with a C or better
CSE	**414**	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 412 with a C or better or currently enrolled
CSE	**420**	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: BSE Computer Syst Engr or BS Computer Science students; CSE 230 or EEE 230 or CSE 330, and CSE 310 with C or better
CSE	**423**	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 320, 325, 360 with a C or better; May not enroll if received a C or better in CSE 461 or 485
CSE	**424**	Systems Capstone Project II	Continuation of capstone project started in CSE 423. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science or Computer Systems Engr BS or BSE students; Must have received a C or greater or be currently enrolled in CSE 423
CSE	**430**	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better; CSE 310 with a C or better OR Graduate CSE student
CSE	**432**	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering or Computer Science BS/BSE student; CSE 430 with C or better
CSE	**434**	Computer Networks	Distributed computing paradigms and technologies, distributed system architectures and design patterns, frameworks for development of distributed software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230, or CSE 330 and CSE310 with C or better
CSE	**438**	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 325 with C or better
CSE	**440**	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better
CSE	**445**	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 360 or be currently enrolled.
CSE	**450**	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**457**	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering or Computer Science - BS students and a grade of C or better in CSE 355 or be currently enrolled.
CSE	**459**	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 355 with a C or better or currently enrolled.
CSE	**460**	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 360 with a C or better or currently enrolled.

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CSE	**461**	Software Engineering Project I	First of two-course software team-development sequence. Planning, management, design, and implementation using object-oriented technology, CASE tools, CMM-level-5 guidelines. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engineering or Computer Science BS student; Pre-or Co-requisite: CSE 460 (with C or better if completed); May not enroll in CSE 461 if received C or better in CSE 423 or CSE 485
CSE	**462**	Software Engineering Project II	Second of two-course software team-development sequence. Software evolution, maintenance, reengineering, reverse engineering, component-based development, and outsourcing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 461 with C or better
CSE	**463**	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 310 with a C or better or currently enrolled.
CSE	**465**	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Information Systems, Computer Systems Engineering BSE, Computer Science BS or Industrial Engineering BSE students and a grade of C or better in CIS 300 or CSE 360 or IEE 305 or currently enrolled
CSE	**466**	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	**467**	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science or Computer Systems Engineering students; CSE 310 completed with a C or better
CSE	**468**	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 with C or better
CSE	**470**	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better or currently enrolled in CSE 310 AND a grade of D or better in MAT 342 or 343 or currently enrolled.
CSE	**471**	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 AND CSE 240 or be currently enrolled.
CSE	**476**	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**477**	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems & Engineering BSE or Computer Science BS students; MAT 343 (or MAT 342) with D or better
CSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**485**	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 and CSE 360 with C or better; may not enroll if received a C or better in CSE 423 or CSE 461
CSE	**486**	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 485 or currently enrolled.
CSE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Pre-Requisites: Must be an honors student.
CSE	**493**	Honors Thesis		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Pre-requisites: Must be an honor student.
CSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering or Computer Science - BS student and cumulative GPA must be greater than or equal to 2.50 OR Graduate Engineering students.
CSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	**507**	Virtual Reality Systems	Computer-generated 3-D environments, simulation of reality, spatial presence of virtual objects, technologies of immersion, tracking systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science PHD, Computer Science MCS, Comp Sci/Engr (Info Assurance) PHD or Comp Sci (Art/Media/Engr) PHD students AND C or better in CSE 408 or CSE 470 or CSE 508
CSE	**509**	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, MPEG 1, 2, 4, and 7 standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science Engineering graduate student
CSE	**510**	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**511**	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**512**	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**515**	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**520**	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**522**	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**530**	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**531**	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**532**	Advanced Operating System Internals	Memory, processor, process and communication management, and concurrency control in the Windows NT multiprocessor and distributed operating system kernels and servers. Ability to understand advanced concepts in operating systems is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**534**	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**535**	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**536**	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**539**	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**543**	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**545**	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**548**	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**550**	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**552**	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In may applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**555**	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**561**	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**563**	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**564**	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**565**	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**566**	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**570**	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**571**	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**573**	Advanced Computer Graphics II	Modeling of natural phenomena: terrain, clouds, fire, water, and trees. Particle systems, deformation of solids, antialiasing, and volume visualization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**574**	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**576**	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**577**	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**578**	Advanced Geometric Modeling II	Advanced concepts of geometric modeling: Bezier curves, B-spline curves, blossoming, polygons, geometric algorithms, shape analysis. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**579**	NURBS: Nonuniform Rational B-Splines	Projective geometry, NURBS-based modeling, basic theory of conics and rational Bezier curves, rational B-splines, surfaces, rational surfaces, stereographic maps, quadrics, IGES data specification.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student or a Mathematics PHD student
CSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		

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CSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisites: Must be a Computer Science or Computer Science Engineering graduate student
CSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	CS	
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CSS	**432**	Issues in Chicana and Chicano Gender	Analyzes social construction of gender identities; emphasis on impact of American and Mexican cultural values on normative gender relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
CSS	**490**	Field Studies in the Chicana and Chicano Community	Introduces principles and methods of qualitative research applied to the Chicana and Chicano community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
CST	**100**	Object-Oriented Software Development I	Basic concepts of object-oriented analysis, design, and programming using Java. Basic Java variables, expressions, arrays, statements, methods, and classes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**150**	Digital Systems	Number systems and arithmetic, Boolean algebra, combinational logic, K-maps, ROMs, PLAs, flip-flops, synchronous sequential circuits, introduction to HDL.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites:CST 100, or be co-enrolled in CST 100; MAT 117 or higher
CST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-3		
CST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**200**	Object-Oriented Software Development II	Object-oriented programming and design; information hiding; inheritance and run-time binding; polymorphism; recursion; GUI programming. Introduces software engineering concepts, including software development life cycles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 100 with a D or better
CST	**201**	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre/Co-requisite: CST 200
CST	**220**	Programming Languages for Technology with C/C++ and Scripting	Programming language design and implementation concepts through programming C/C++ and scripting; language paradigms, compilation and interpretation, types, run-time management, data control, pointers, inheritance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 150, and CST 200 with a D grade or better
CST	**230**	Applied Data Structures	Applications of data structures: strings, stacks, queues, trees, hash tables. Time/space complexity, recursion, searching, and sorting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 200 and MAT 243 with D or better
CST	**250**	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Must have taken CST 100, & 150 with a D or better. Must be co-enrolled in CST 251
CST	**251**	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**256**	C Programming for Engineering Technology	Applied and practical problem solving using the C programming language.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**298**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		

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CST	**315**	Software Enterprise I: Tools and Process	Introduces tools and techniques used in software enterprise/development, including coding, design, testing, configuration management, and personal process management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Completed CST 200 and CST 230 with a D or better
CST	**316**	Software Enterprise II: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**335**	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 230; MAT 243
CST	**350**	Digital Systems Design with Verilog	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET150 or CST150 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**359**	Internet Networking Protocol	Computer networking for application, transmission control and network layers using the Internet protocols as a model; reliability and security.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**364**	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must have earned D or greater in CET 200 or CST 200 or be currently enrolled AND earned D or greater in CET 354 or CST 354 or be currently enrolled OR must be Technology Science BAS, MS, MSTECH, or Master Computing Studies student
CST	**383**	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Must be Technology Science non-degree or BS student AND earned C or greater in CET 100, CET256, CST100, or CST256 or currently enrolled OR must be Technology Science BAS, MS, MSTECH, Master Computing Studies, or Engineering PHD student
CST	**386**	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Tech Science or Eng BS/BSE/BAS/NonDegree AND C or greater in CST100 or CST256 AND C or greater in CST 250/251 OR Tech Sci BAS/MS/MSTECH, Master Comp Studies or Eng PHD student
CST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**415**	Software Enterprise III: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	L	
CST	**416**	Software Enterprise IV: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 415; ENG 102, 105, 108 or 112
CST	**420**	Foundations of Distributed Web-Based Applications in Java	Principles underlying design and implementation of distributed software components; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be Technology Science BAS/BS/MS/MSTECH student AND earned a C or greater in CET 230 or CST 230 or be currently enrolled AND earned a D or greater in CET 386 OR CST 386 or be currently enrolled
CST	**425**	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**427**	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**428**	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**433**	Database Technology	Introduces database technologies and DBMS, data models, and languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 230 and MAT 243 completed with a C or better or currently enrolled
CST	**441**	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**452**	Advanced Digital Systems Design with VHDL	Uses VHDL to design components of computers and digital systems. Design examples include RISC processor and ALU, memory controller, I/O controller. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**456**	Microcomputer Systems Interfacing	Programming using BIOS and DOS routines. Disk operations, TSR routines, and device drivers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 354 or CST 354 with C or better or enrolled; CET 420 or CST 420 with D or better or enrolled OR Techn and Innovation or Fulton Engr graduate student
CST	**457**	Advanced Assembly Language Applications	Applies 32-bit assembly language programming using advanced assembler techniques and interfacing to high-level languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CST 354 with D or better; CET 354 with D or better OR Technology and Innovation or Fulton Engineering graduate student

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CST	**458**	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**473**	Digital/Data Communications	Signals, distortion, noise, and error detection/correction. Transmission and systems design. Interface techniques and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		
CST	**481**	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**482**	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**483**	Cyber Security Capstone Project	Applies security techniques to a real-world situation. Development of security policy, risk solutions, and incident response facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	2.		
CST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**486**	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET383 or CST 383 with C or better; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering Graduate student
CST	**488**	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be either Technology Science or Engineering BS/BSE/BAS/Graduate NonDegree/ MS/MSTECH AND earned C or greater in CET383 or CST383 AND CET386 or CST386 or be currently enrolled OR must be Tech Sci MS/ MSTECH or Eng PHD student
CST	**489**	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Technology and Innovation BS/BAS student or BSE student; CET 383 or CST 383; CST 359 (or CST 459 or CET 459) or Graduate Non-degree or MSTECH
CST	**490**	Reading and Conference		N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
CST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
CST	**496**	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-7		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering Graduate student
CST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-3		
CST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**520**	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequistes: CET364 or CST364 OR Graduate, Non-Degree, or Post Bacc student AND College of Engineering & Applied Sciences or School of Technology
CST	**533**	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
CST	**540**	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420
CST	**552**	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
CST	**554**	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**556**	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 420

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**557**	Embedded Applications Development	Current trends in embedded system development using C, assembly, and special purpose hardware. Development versus target environment issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**566**	Principles and Practices of Operating Systems	Principles and practices of operating systems: virtual memory systems, I/O devices and systems, file systems and organization, and other topics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**576**	Embedded Real-Time Programming	Topics in real-time embedded operating systems such as synchronization, communications, file systems, and memory sharing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
CST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**586**	Digital Modeling Techniques	Digital system modeling and simulation using hardware description languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering	1-12		
CST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-15		
CST	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
DAH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**301**	Philosophy and Criticism of Dance	Philosophical issues in dance and dance criticism, with emphasis on written analysis and interpretation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
DAH	**492**	Honors Directed Study	Consult with an honors advisor before enrolling. May be repeated for credit.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DAH	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DAH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**495**	Theory and Methods of Dance Research	Examines modes of inquiry, data gathering techniques, data analysis and representation, prospectus design, and presentation style for dance research studies. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**502**	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		

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DAH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DAH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		
DAH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DAN	**122**	Rythmic Theory for Dance II		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**130**	Dance	Introduces styles and forms of dance; ballet, modern, jazz, tap, ballroom, ethnic. Fee.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**321**	Music Literature for Dance	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN222 and MUS340 with a grade of C or greater or be currently enrolled
DAN	**330**	Dance	Advanced levels. Continuation of DAN 230. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**351**	Methods of Teaching Ballet	Analysis and acquisition of teaching techniques and materials for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**352**	Dance Education Theory	Motivation; learning; assessment; historical, cultural, and social constructs; outreach; service; advocacy; curriculum development in dance education. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance major
DAN	**354**	Integrated Approaches to Dance Education	New methods of dance education pedagogy. Essential skills to employ and integrate instructional technology within dance curricula. Activities promote experiential and layered instruction in integrated approaches to multicultural pedagogy that include interdisciplinary, integrated, and immersion strategies of education. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**364**	Choreography and Accompaniment	Experience in the use of traditional and nontraditional musical structures as a basis for choreographic projects.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-Requisites: Must have completed DAN265 with a grade of C or greater or be currently enrolled
DAN	**365**	Advanced Choreography	Investigation and practice of contemporary styles of choreography.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN364 with a C or greater; must have completed DAN265 with a C or greater or be currently enrolled
DAN	**380**	Performance Studies Practicum	Focus on developing rehearsal skills and achieving performance excellence through the preparation of three completed works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**435**	Technique and Theory of Ballet	Study of professional advanced ballet technique with emphasis on preparation for performance. 4 hours weekly. May be repeated for credit.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DAN	**445**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement investigation, observation, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DAN	**471**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. May be repeated for credit. fee	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**472**	Concert Dance	Extensive preparation of repertory or new works created by experienced choreographers. Simulates dance company experience, culminating in performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**496**	Senior Dance Education Capstone	Original research that integrates dance and education. Includes production of written document and public presentation. Fall semester must be completed before spring registration. Must be repeated for a total of 4 semester hours.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DAN 350 with C or better; DAN 352 with C or better; DAN 354 with C or better; DAN 356 with C or better
DAN	**510**	Dance Production	Theory of costuming, lighting, makeup, scenery, and sound as related to dance performance. May be repeated once for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAN	**522**	Sound Design for Dance	Focus on digital recording/editing of audio compositions for choreographic and video projects. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1-2		Pre-requisite: Must have completed DAN 521 or be co-enrolled in DAN 521

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DAN	**545**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement integration, observation, critical research, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**551**	Graduate Dance Pedagogy: Ballet	Advanced analysis of teaching techniques for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**671**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3-4		Pre-requisites:Must be a Graduate Student
DCE	**100**	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**110**	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**111**	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**112**	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**113**	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**114**	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**116**	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**117**	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**118**	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**120**	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**121**	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**122**	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**123**	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**124**	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**125**	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**126**	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**130**	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major
DCE	**131**	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance student; DCE 130 with C or better
DCE	**134**	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**135**	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**160**	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student

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DCE	**161**	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	**170**	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance major
DCE	**171**	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance majors
DCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**201**	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**210**	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	**211**	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	**216**	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	**220**	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	**221**	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**222**	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	**223**	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	**224**	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	**225**	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	**230**	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	**234**	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**235**	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**260**	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major; DCE 161 with C or better
DCE	**262**	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**263**	Rhythmic Theory for Dance II	Continuation of DAN 221 with an emphasis on small group/movement projects in relation to musical time and structure. CD-ROM work included. Students with rhythmic theory transfer credit may meet the enrollment requirements by passing a proficiency exam. Please contact the instructor of the course for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**270**	Second-Year Seminar I	Theory and practice of lighting, scenery, sound, and stage management for dance production. Labs cover all areas of production.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites: Dance Majors only; DCE 171, First-Year Seminar or DCE 194: First-Year Seminar
DCE	**271**	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisites: Dance Majors Only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**302**	Cross-Cultural Dance Studies	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	(L or HU) & G	Pre-reqs: DAH 201 or DCE 201 with C or better; ENG 101 and ENG 102 OR ENG 105 with C or better
DCE	**324**	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)
DCE	**325**	Latin/Salsa III	Refines dances learned in the intermediate level of major Latin dances, including salsa, cha cha, rumba, meringue, bachata, and samba. Prepares students to have a more advanced command of the complex rhythms and figures used in the major Latin dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 225 or DAN 294 (Latin/Salsa II)
DCE	**334**	Technique and Theory of Modern Dance	Advanced concepts of modern dance technique. Development of movement quality and performance skills. 6 hours weekly. Placement audition required.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**335**	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**340**	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	CS	Pre-requisite: ART 112 or Dance BFA, Dance Minor or BIS: Dance concentration student
DCE	**350**	Dance for the Classroom Teacher	Develops teaching methodology for implementation of dance curriculum in K-12 classrooms.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DCE	**354**	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**356**	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major
DCE	**370**	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 271 with a Y
DCE	**371**	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**401**	Dance History	History of dance with a focus on Western forms from the Renaissance to contemporary times. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU	
DCE	**434**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance technique. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**437**	Dance Kinesiology	Principles of kinesiology applied to dance movement, including identification of muscular imbalances, inherited anatomical differences, and pathomechanics in dance technique.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance BFA student; BIO 201 with a D or better
DCE	**438**	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	**460**	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**461**	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance students; DCE 460 with C or better
DCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**492**	Honors Directed Study		N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DCE	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**501**	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**530**	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**534**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		Pre-requisite: Dance Graduate student
DCE	**535**	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**538**	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: MFA Dance student
DCE	**540**	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**543**	Sound Design for Dance	Audio mixing for analog/digital recording and editing. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors
DCE	**554**	Graduate Dance Pedagogy	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**560**	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**561**	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student; DCE 560
DCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DCE	**634**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student
DCE	**660**	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites:Must be a Graduate Student
DCI	**510**	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**511**	Establishing Effective Teaching Practice	Helps beginning teachers establish and strengthen best practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**512**	Developing Strategies for Teaching Practice	Helps beginning teachers refine management strategies and instructional methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**520**	Teaching Standards Applied to Professional Practice	Develops teacher skills and self-reflective practices to assess instruction and document and achieve professional growth in teaching standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**521**	Reflective Practice in Teaching Standards	Teachers apply reflective practices to develop professional presentation portfolios.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**530**	Establish a Mentoring Partnership	Prepares veteran educators for mentoring. Mentors collaborate, reflect on their practice, and become teacher leaders through professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**531**	Analyzing and Planning for Professional Growth through Mentoring	Refines strategies for assessing instruction and provides collegial feedback.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: COE 501or DCI 510 with B or better
DCI	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**701**	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**702**	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**703**	Research in Teacher Development and Leadership	Examines research in teacher education and development from preservice through in-service. Students participate in the review of research related to broad themes within the recent literature. Strands/themes of investigation include a brief review of the history of teacher education, teacher development, professional development and teacher leadership, teacher evaluation, qualitative and quantitative research in teacher education, reform in teacher education, including recent policies and politics and other issues.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**704**	Adult Learning Theory and Practice	Explores the multiple dimensions of learning in adulthood, including the social contexts of learning, and cognitive and developmental aspects of learning. Focuses on the experience and practice of adult learning, and examines the various theories attempting to explain how adults learn.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**705**	Teacher Leadership Theory and Professional Practice	Teacher leaders analyze leadership skills as they reflect on their own practice and professional development experience. They process knowledge of how to effectively promote positive practices among teachers at varied stages in their careers. Teacher leaders are involved in scholarly inquiry and discourse by means of leadership institutes, peer collaboration, reflective questioning and individual research. Teacher leaders also develop the perspective of the teacher as researcher as they read and critically evaluate published research related to teacher leadership in professional and academic literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
DCI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**451**	Design Research and Educational Gaming Practicum	Principles of design research as applied to educational games. Includes implementation of a design research project.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: RDG 440 with C or better; EDT 329 with C or better
DCI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
DCI	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
DCI	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
DCI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
DNP	**600**	Research Methods	Course on research methods in a specific discipline.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**601**	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**602**	Principles of Research Methods and Evidence-based Practice	Examines processes of scientific inquiry and their application to generating knowledge for and refining nursing practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**603**	Evaluating and Applying Evidence in Healthcare Outcomes	Examines the role of inquiry and innovation in scientific, theoretical, and practical underpinnings of healthcare improvement.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisite: Graduate Nursing Program student
DNP	**604**	Advanced Human Pathophysiology Core	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**605**	Advanced Health Assessment Core	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
DNP	**607**	Advanced Human Pathophysiology Women's Health	Didactic course for women's health nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**608**	Advanced Pharmacotherapeutics Core	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate Nursing Program, Doctor of Advanced Nursing Practice. Co-enrolled in either: DNP 612, 622, 632, 642, or DNP 672
DNP	**609**	Advanced Practice Nursing Role I	First of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: Nursing Graduate Program
DNP	**610**	Advanced Practice Nursing Role II	Second of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP 609 with B or better
DNP	**611**	Advanced Health Assessment of Women Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of women across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 605

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DNP	**612**	Applied Pharmacotherapeutics for Women	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for women.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 608
DNP	**613**	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	**614**	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	**615**	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	**616**	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	**617**	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	**618**	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	**620**	Advanced Human Pathophysiology Adult	Didactic course for adult nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 604
DNP	**621**	Advanced Health Assessment of Adults Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of adults and adolescents.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 605
DNP	**622**	Applied Pharmacotherapeutics for Adults/Geriatrics	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for adults and geriatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 608
DNP	**623**	Adult Health Promotion	Introduces adult health promotion and disease prevention, emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 624
DNP	**624**	Adult Health Practicum I	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 623
DNP	**625**	Management of Common Problems in Adults	Includes theory/research that guides the management/maintenance of adults with chronic health alterations. Emphasizes psychophysiological interrelationships of illnesses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 626
DNP	**626**	Adult Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 625
DNP	**627**	Management of Complex Health Problems in Adults	Didactic course designed to complement DNP 628. Focus on application of EBP in care of adults with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requiste: DNP 628
DNP	**628**	Adult Health Practicum III	Clinical practicum designed to complement DNP 627. Focuses on application of EBP in care of adults with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 627
DNP	**630**	Advanced Human Pathophysiology Family	Didactic course for family nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 604
DNP	**631**	Advanced Health Assessment for Family Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 605
DNP	**632**	Applied Pharmacotherapeutics for the Family	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 608
DNP	**633**	Family Health Promotion in Primary Care I	First didactic role specialty course. Focuses on concepts and strategies to promote, manage, and maintain health of child, adult, and family.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	**634**	Family Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	**635**	Management of Common Family Problems in Primary Care II	Second didactic role specialty course utilizing knowledge from previous courses to formulate therapeutic promotion, management, and maintenance for individuals across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	**636**	Family Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	**637**	Management of Complex and Chronic Family Problems in Primary Care III	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan for the Family Nurse Practitioner role specialty.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638

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DNP	**638**	Family Health Practicum III	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	**640**	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 604
DNP	**641**	Advanced Health Assessment for Children Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of children from birth to age 21 years.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 605
DNP	**642**	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 608
DNP	**643**	Developmentally Based Care of the Well Child	Focuses on current practices, research, and issues related to health promotion and disease prevention for children and adolescents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	**644**	Well Child Advanced Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	**645**	Management of Common Problems in Pediatric Primary Care	Focuses on concepts, theories, and research as a basis for strategies related to management of illness and health maintenance for children.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	**646**	Advanced Practicum II in Pediatric Primary Care	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645
DNP	**647**	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on strategies for health maintenance and management of childhood acute illnesses, complex and chronic illnesses, and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	**648**	Management of Complex and Chronic Problems in Pediatric Primary Care-Practicum III	Clinical course assists students in developing advanced clinical skills in pediatric health promotion and advanced-practice clinical decision making; includes the diagnosis and treatment of complex and chronic problems in pediatric primary care.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647
DNP	**650**	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 604
DNP	**651**	Advanced Health Assessment of Neonates Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 605
DNP	**652**	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**653**	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	**654**	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	**655**	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	**656**	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	**657**	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**658**	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	**659**	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	**660**	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiolgy and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**662**	Advanced Mental Health Assessment Across the Lifespan Lab/Practicum	Focuses on integration of knowledge and development of skills in assessment of psychiatric disorders occurring in children, adolescents, and adults.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		

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DNP	**663**	Mental Health Promotion in Adults	Analyzes issues, theories, and research in restoration and promotion of mental health. Emphasizes developing conceptual framework for psychiatric nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 664
DNP	**664**	Adult Psychiatric Mental Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 663
DNP	**665**	Management of Common Mental Health Problems in Adults	Focuses on development of theoretical basis for intervention and a knowledge base for collaboration and consultation in the mental health area.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Corequisite: DNP 666
DNP	**666**	Adult Psychiatric Mental Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 665
DNP	**667**	Management of Complex and Chronic Mental Health Problems in Adults	Focuses on modalities of evidence-based treatment with adolescents and adults with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 668
DNP	**668**	Psychiatric Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic adolescent and adult mental health disorders.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 667
DNP	**671**	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**672**	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications as a treatment for children and adolescents with mental health disorders.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**673**	Mental Health Promotion in Children, Adolescents, Adults, and Families Across the Lifespan	Focuses on evidence-based interventions to promote the mental health of children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Child and Family Psychology Nurse Practioner), (Child & Adolescent Mental Health) or Child and Family Mental Heath Nurse Practioner; DNP 671; DNP 672; Co-requisite: DNP 674
DNP	**674**	Child and Family Mental Health Practicum II	Clinical experiences to become skilled in assessment and evidence-based individual psychotherapy of common mental health disorders in children, adolescents, adults and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 671; DNP 672; Co-requisite: DNP 673
DNP	**675**	Management of Common Mental Health Problems in Children, Adolescents, and Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with common psychopathology.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Prerequisite: Graduate Nursing student; DNP 673; Co-requisite: DNP 676
DNP	**676**	Child and Family Mental Health Practicum I	Clinical experiences to become skilled in assessment and evidence-based management of common mental health disorders in children, adolescents, and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Prerequisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; Co requisite: DNP 675
DNP	**677**	Management of Complex/Chronic Mntl Hlth Problems in Children, Adolescents&Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate Nursing student; DNP 673; DNP 675; Co-requisite: DNP 678
DNP	**678**	Child and Family Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 674; DNP 676;Co-requisite: DNP 677
DNP	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
DNP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
DNP	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**685**	Geriatric Health Promotion Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
DNP	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Nursing and Healthcare Innovation PhD or DNP student. Pre/Co-requisite: DNP 682 or NUR 682. credit is allowed for only DNP or NUR 686

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
DNP	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**689**	Geriatric Chronic Disease and Syndrome Management Practicum III	Diagnosis, management and application of advanced knowledge and skills for comprehensive primary care and care of older adults with geriatric chronic diseases and syndromes.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
DNP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**696**	Advanced Human Pathophysiology Older Adults	Didactic course for gerontological/geriatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**704**	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student
DNP	**705**	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	**708**	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**709**	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**710**	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:One of the following DNP concentrations:Adv Nurs Pract(AduNurPractnr); Adv Nur Prc (Child/Fam Psy NP); Adv Nursing Practice;Adv Nur Prac (Family NP);Adv Nur Prac (Neonatal NP); Adv Nur Prac (PediatricNP); AdvNurPracAdl
DNP	**711**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**712**	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DSC	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
DSC	**101**	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
DSC	**180**	Athena Design Success	Facilitates academic success for first-year College of Design students in the Athena program through developmental, educational, and professional experiences.	N	DIS	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
DSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**236**	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

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DSC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
DSC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
DSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
DSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	**501**	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**520**	Contemporary Design Issues	Projected applications in design production, planning, and decision-making processes.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**525**	Design Methodologies	Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Fee.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**558**	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design student
DSC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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DSC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
EA	**555**	Sch-Plant-Plan-Main		Y	LEC	Y	CNV	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
EAC	**426**	Professional Knowledge in Early Childhood Education	Explores issues related to professional knowledge, including disciplinary instruction and the impact of the community on students¿ learning.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
EAC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
ECD	**501**	Interprofessional and Family Collaboration	Explores trends and practices, educationally appropriate instruction and resource materials, methods and strategies in early childhood education. Discusses history of the field, theory, contemporary issues and controversies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**505**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**520**	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**522**	Developmental Social Experiences in Early Childhood Education	Materials, techniques, aesthetic expression, creative activities, and values in the integrated curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**527**	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**544**	Play-Based Education in Inclusive Settings	Theories of play and the educational implications of each in an early childhood/elementary inclusive curriculum for best teaching practices. Practical applications for the primary grades of the elementary and preschool setting in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**548**	Childhood Studies and Social and Political Environments	Examines the emergence of interdisciplinary/transdisciplinary childhood studies from historical, social, and political contexts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only

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ECD	**549**	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**555**	Contemporary Practices in Early Childhood	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**565**	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**571**	Pre-K Student Teaching	Supervised field experience consisting of 160 total hours of work with children between the ages of birth to age 4.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	4.		Pre-requisite: Graduate students only
ECD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**601**	Theories and Issues in Early Childhood Education	Current theories and issues in early childhood education. Presents issues of early childhood best practices, policy, theory, research, and evaluation that are of significance to the early childhood professional. Highlights building on the child development conceptual framework as related to theory and practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
ECD	**733**	Social and Emotional Development	Inquiry into the social and emotional development dynamics in children, such as peer relationships, self-concept, and parenting processes, with implications for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**503**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**541**	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth throught eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children's diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECD	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**555-W**	Modern Practices in Early Childhood Education	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**570**	Pre-K Internship	Field experience consisting of 30 total hours of work with children between the ages of birth-age 4. Required for Arizona Dept. of Education Early Childhood Endorsement.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**578**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECD	**211**	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork. May be repeated once for credit.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
ECD	**220**	Nutrition, Health, and Safety for Young Children	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Students are required to have first aid and CPR certification, which may require a fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
ECD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**301**	Technology, Media, and Community-Based Education for Young Children	Examines technology, media, toys, and community-based educational opportunities to support the education of three- to eight-year-old children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**302**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**312**	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**313**	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**315**	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**316**	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**321**	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**323**	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**324**	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**341**	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**355**	Accommodating Instruction in Early Childhood Education	Identifying and accommodating learners with special needs, including classroom adaptations in instruction and assessment, for pre-K-3 classroom environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

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ECD	**396**	Field Experience: Community-Based Early Childhood Education Setting	Observation in classrooms and individual and small group instruction. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**397**	Field Experience II	Instruction, observation, and management of small groups and the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**402**	Integrated Curriculum and Assessment: Math and Science	Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade, within an integrated curriculum approach.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**403**	Educational Environments: Preschool/Kindergarten/Primary Grades	Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**405**	Practicum in Teaching Reading and Language Arts in Early Childhood	Supervised experience teaching reading and language arts at the preschool, kindergarten, and primary-grade (1-3) levels. Developmentally appropriate strategies to promote young children's speaking, listening, reading, and writing abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**406**	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**410**	Science Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood science; age-appropriate standards; active investigation of science concepts; inquiry and collaborative learning; connections between science and other subject areas. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**412**	Mathematics Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood mathematics; age-appropriate standards; active investigation of mathematics concepts and ideas; connections between mathematics and other subject areas.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**413**	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**414**	Interprofessional Practicum	Investigates services and agencies available in the local community to parents of children with special needs. Practical experiences with an intermittent seminar format. Dispositions, knowledge, experiences, and skills necessary for interprofessional collaboration across multiple agencies and programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**415**	Practicum - Literacy Curriculum, Instruction, and Assessment, K-3	Supervised experience teaching reading and language arts in the primary grades.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**416**	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**470**	Early Childhood Education Student Teaching Seminar	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**476**	Integrated Curriculum: Birth-Pre K	Introduction to teaching children birth through pre-K, including classroom organization, curriculum, and professional relationships.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**477**	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	4-6		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**478**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	5-8		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**479**	Capstone Seminar in Early Childhood Education	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**481**	Issues and Practices in Early Childhood Education	Stakeholder analysis of teacher education experiences applicable to preparation that leads to increased educational opportunity and success for diverse children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**493**	Honors Thesis	Honors Thesis	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
ECD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

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ECD	**496**	Field Experience III	Instruction and management of small groups and substantial work with the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
ECD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECE	**330**	electrical Networks		N	LEC	N	CNV	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	4.		
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
ECN	**201**	Economic Issues and Analysis	Introduces tools used in basic economic analyses, emphasizing application to contemporary national and international issues. Not open to students with credit in ECN 211 or 212	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisite: Not open to students with credit in ECN 211, ECN 212, 213, or ECN 214
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**213**	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 210, MAT 211, MAT 270 or MAT 271.
ECN	**214**	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 211 or MAT 271.
ECN	**221**	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: MAT 211 or MAT 271 with a C or better or currently enrolled
ECN	**231**	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must be an Honors student; Must have completed MAT 211 or MAT 271 with a grade of C or greater or be currently enrolled.
ECN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be an Honors Student; Must have completed one of the following courses with a grade of C or greater or co-enrolling: MAT 210, MAT 211, MAT 270, MAT 271 or MAT 272
ECN	**303**	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	**306**	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled. May not enroll if completed IBS 306 with a D or greater
ECN	**312**	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**313**	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	**315**	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**331**	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**335**	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre- or corequisites with grade of "C" or better: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271.
ECN	**345**	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with grade of C or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**360**	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**365**	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**382**	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	**384**	Economics of Social Behavior	Applies economic analysis to contemporary behavior; discrimination, work versus leisure, crime, medical care, macroeconomic policies. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must have minimum cumulative GPA of 2.00; Must have minimum of 56 total earned hours or be a non-degree seeking student OR any Graduate degree seeking student
ECN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**404**	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**410**	Applied Business Forecasting	Applies forecasting techniques in business and institutional environments. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 221 or STP 226, AND ECN 214 or ECN 312/314 with a grade of C or greater.
ECN	**413**	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**414**	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**416**	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**421**	Earnings and Employment	Origins of labor movement, analysis of labor unions, labor markets, collective bargaining, and current policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Prerequisites: With a grade of "C" or better: ECN 214 (or 312). Pre- or corequisite: ECN 213 (or 313).
ECN	**425**	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314, AND ECN 221, ECN 231 or STP 226 with a grade of C or greater
ECN	**436**	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**438**	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 213 or ECN 313 with a grade of C or greater or be currently enrolled
ECN	**441**	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**445**	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 213 or 313; ECN 214 or 312 or 314; MAT 211 or 271 with grade of C or better.
ECN	**450**	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**453**	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**470**	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**475**	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	L	Pre-reqs: ECN 213 or 313 AND ECN 214 or ECN 312/314 with C or greater; senior standing.
ECN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Min 3.0 ASU cum GPA; ECN 213 or 313, and ECN 214 or 312/314 with a grade of C or greater.
ECN	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: Must have completed ECN 313and ECN 314 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**501**	Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		
ECN	**502**	Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	**503**	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a MBA degree program student
ECN	**504**	History of Economic Thought	Historical development of economic theory. Emphasizes the development of economic analysis from preclassical economics through Keynes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**509**	Macroeconomic Theory and Applications	Theory of income, output, employment, and price level. Influence on business and economic environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**510**	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**525**	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:MAT 210 with a grade of D or better or currently enrolled
ECN	**527**	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**530**	Experimental Design	Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate Students only (degree and non-degree seeking)
ECN	**535**	Multivariate Methods	Advanced statistical methods used in business research. Multivariate analysis of association and interdependence.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**540**	Forecasting	Foundation of statistical forecasts and forecast intervals; applies classical and computer-assisted forecasting methods to business forecasting problems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites:QBA 502, MAT 210 completed with a D or better, or currently enrolled
ECN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 712 and ECN 714 with a grade greater than a C
ECN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		

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ECN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**711**	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**712**	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**713**	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**714**	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**715**	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 with a grade of C or greater; Must have completed ECN 713 with a grade greater than a C
ECN	**716**	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 714 with a grade of C or greater; Must have completed ECN 712 with a grade greater than a C
ECN	**717**	International Macroeconomics	Intertemproal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
ECN	**721**	Labor Economics	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**722**	The Aggregate Labor Market	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**725**	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**726**	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 725 with a grade better than a C
ECN	**727**	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater;
ECN	**736**	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**738**	International Finance	Foreign exchange market, balance of payments, and international financial institutions and arrangements; theory and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**741**	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: W.P. Carey Graduate degree-seeking students only; Must have completed ECN 712 with a grade of B or greater; Co-requisite: ECN 714
ECN	**753**	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**760**	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 and ECN 712 with a grade greater than a C; Co-requisites: ECN 713 and ECN 714
ECN	**770**	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics: nonlinear programming, the Kuhn-Tucker theorem, concave programming, optimization over time.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student

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ECN	**784**	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
ECN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
ECT	**479**	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**511**	School Law	Constitutional, statutory, and case law that relates to all school personnel, pupils, the school district, and other governmental units. Contracts, dismissals, tenure, retirement, pupil injuries, liability of personnel and district, school district boundary changes, and bonding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**515**	Administration and Technology in Learning	Provides students with hands-on exposure to technology that assists with school improvement initiatives.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**525**	Human Relations and Societal Factors in Education	Interrelations between problems of educational administration and interdisciplinary social sciences. Communications skills, morale, authority, and perception. Concepts from political science, economics, and social-psychology useful to the administrator.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**534**	Concepts of Learner-Centered Leadership	Principles, theories, attributes, and skills related to learner-centered leadership.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**548**	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**555**	Educational Facility Planning	School building needs, educational planning for facilities, responsibilities of architects, duties of contractors, and equipping and furnishing of school buildings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**571**	School Business Management	Purchasing, budgeting, accounting, payroll management, auditing, financial reporting, insurance, and administration of nonteaching personnel and services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**573**	Human Resources Administration	Organization for human resources services; development of policy to govern the human resources function and its related processes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**576**	The School Principalship	Problem and lab approaches used to provide application of administrative activities of elementary and secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**611**	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**624**	Organizational Development and Management of Schools	Current organizational patterns for public schools. Emphasizes the organizations, human, and social dimensions on organizations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**645**	Leadership Development for Education Leaders	Principles, theories, attributes, and skills related to individual leadership development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**675**	Politics of Education	Uses social science theory and research to consider the political context of educational policy making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**676**	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**679**	Administration of Special Programs in Education	For personnel administering special educational services; responsibilities of superintendents, principals, supervisors, and directors for special education, student personnel, audiovisual, library science, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**711**	Administrative Leadership	Emphasizes research in leadership; application of research findings to administrative and supervisory functions in educational endeavors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**722**	Administration of Instructional Improvement	Recent research relating to administrative and supervisory responsibilities for the improvement of the educational program. Effective processes by administrators, supervisors, consultants, and coordinators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**723**	Diversity in Education for School Leaders	Discusses current issues and leadership strategies for meeting the needs of diverse student populations combating inequity and inequality in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EDA	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		

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EDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-3		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		
EDA	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**512**	Critical Issues in Educational Leadership	Legal and ethical concepts of educational practices in federal and state laws affecting charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**514**	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**521**	Evaluation of Teaching Performance	In-depth analysis of legal basis of teacher appraisal, teacher competency, measurement of teacher performance, and application of performance appraisal systems.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**524**	Theory and Application of Educational Administration	History and development of public school administration in the United States; current organizational patterns for public education at local, intermediate, state, and national levels; current theoretical positions in educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**547**	Marketing and Community Relations for Educational Entrepreneurs	Strategic marketing and community relations concepts and their application, formulation, and execution in charter and independent schools and related services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**556**	Management and Human Resources for Educational Entrepreneurs	Entrepreneurial leadership and organization theory applied to managing human resources in competitive educational organizations by increasing the effectiveness of decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**557**	Facilities Planning for Educational Entrepreneurs	Legal and practical implications involved in designing or refurbishing charter school facilities to maximize space to facilitate student development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**558**	Financial Planning and Reporting for Educational Entrepreneurs	Financial planning and reporting concepts, requirements, and procedures for charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**572**	School-Site Business and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**578**	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**634**	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EDA	**772**	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**773**	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDC	**425**	Integrated Learning Experience IV: Advanced Management and Professional Knowledge	Explores issues related to professional knowledge, including interdisciplinary instruction, management, and the impact of the community on students' learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	Institute & Grad Sch Education	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**302**	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDP	**303**	Human Development	Selected aspects of child and adolescent development. Emphasizes possibilities for influence by teachers and parents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
EDP	**310**	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	SB	
EDP	**313**	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
EDP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**454**	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
EDP	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
EDP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
EDP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDP	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**510**	Essentials of Classroom Learning	Theoretical and empirical foundations of learning in the classroom milieu. Critical exposure to research and method in instructional psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	**513**	Child Development	Examines problems and achievements experienced by children growing up in a technological society. Emphasizes discovering the child's perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**514**	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**530**	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**535**	Applied Behavior Analysis	Principles of conditioning as applied to behavior. Current research on the experimental analysis of behavior in educational psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**536**	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**540**	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**541**	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**542**	Research Methods in the Learning Sciences	Students read, design, and carry out original research in the learning sciences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be a Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student and completion of EDP 540 with a grade of C or better
EDP	**544**	Psychology of Reading	Alternate analyses of the reading process; designs and procedures for investigating instructional and noninstructional variables related to reading achievement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**545**	Higher-Order Processes in the Learning Sciences	Examines original research on induction, deduction, analogy and transfer, knowledge representation, and other issues in learning.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**550**	Introduction to Measurement in Education	Nature and types of educational measures. Critiquing and selecting appropriate measuring devices. Constructing measuring devices. Social controversies about tests.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**552**	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**554**	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**560**	Individual Intellectual Assessment	Issues in administration and interpretation of individual intelligence tests. Theoretical basis, ethical considerations, and diagnostic use of test results. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: School Psychology Ph.D or Counseling Psychology Ph.D
EDP	**561**	Lab in Psychological Assessment	Lab experience in administration, scoring, and interpretation of individual intelligence tests.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Co-enrolled in EDP 560
EDP	**562**	School Psychology: Ethics, Theory, and Practice	Provides information regarding the ethics, history, and theory of current school psychology practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**563**	Interventions in School Psychology	Examines case-based consultation and consultation research relevant to school psychology practice.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**564**	Academic Interventions	Skills-building course emphasizing academic interventions and outcome-based educational decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**566**	Diagnosis of Learning Difficulties	Clinical diagnosis of learning difficulties, emphasizing specific academic problems. Use and interpretation of diagnostic instruments in practical school situations. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDP 560 and 562 with a grade of B or better
EDP	**567**	School Psychological Services to Minority Students	Historical perspectives and major issues in psychological and academic assessment and interventions with minority school children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**568**	Diagnosis and Interventions for Children and Adolescents with Emotional Handicaps	Clinical diagnosis of emotional handicaps in children and adolescents with emphasis on interpretation of diagnostic instruments and designing appropriate interventions in school settings. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**651**	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of COE 503 with a grade of C or better
EDP	**652**	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**654**	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**311**	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
EDP	**323**	Professional Development, Learning, and Motivation	Applies educational psychology principles in classrooms; strategies for building classroom community; learner-centered and intentional teaching; and proactive professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
EDT	**321**	Computer Literacy	Surveys the role of computers in business, industry, education, and personal life. Lab experience with word processing, spreadsheet, and presentation software as well as Internet research and the creation of a personal Web site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDT	**323**	Computer Applications	Introduces database design principles using Microsoft Access and general programming concepts using the Visual Basic.Net programming language.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	Pre-requisites: EDT 321 or CSE 180 or any ACO, CIS, CSE, or CST course with a D or better or currently enrolled
EDT	**329**	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**405**	Presentation Technology for Multimedia	Explores multimedia hardware and software used in creating presentations for educational, corporate, and commercial applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**406**	Computer Graphics and Animation	Study and application of design and animation techniques for use in video or computer-based presentations.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**455**	Authoring Tools	Use of current authoring tools to design and deliver computer-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDT	**501**	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**502**	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**503**	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**504**	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**505**	Multimedia Presentation Techs	Explores the design of multimedia presentations and the utilization of tools and resources to effectively deliver those presentations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**506**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**507**	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: EDT 501 with B or better
EDT	**511**	Technology Applications in Education	Integrates and evaluates emerging technologies into K-12 and adult teaching and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**520**	Educational Technology and Training	Applies educational technology to training and human performance systems in business, industry, and government; emphasizes trends and project management.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 with a grade of C or better
EDT	**523**	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**525**	Web Resources for Educators	Explores Web-based and distance learning applications for educators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**527**	Instructional Video Production	Design and production of instructional video.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 503 with a grade of C or better
EDT	**528**	Development of Web-Based Instruction	Design and development of online instruction using advanced technologies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**530**	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**531**	Hypermedia	Design, development, and evaluation of open-ended, nonlinear computer-based tools and applications.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 455 with a grade of C or better
EDT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, 502, and EDT 503 with a grade of C or better
EDT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, EDT 502, and EDT 503 with a grade of C or better
EDT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Students who have credit for RDG 634, may not enroll in EDT 634
EDT	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDT	**701**	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 and 502 with a grade of C or better
EDT	**702**	Research in Technology-Based Education	Critical exposure to theories, research, and methods in technology-based education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**703**	Research in Distance Education	Seminar with emphasis on research in telecommunications and distance education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: EDT 523 with a grade of C or better
EDT	**704**	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
EDT	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completed EDT 501, EDT 502, and EDT 503 with a C or better
EDT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Completion of EDT 701 with a grade of C or better
EDT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**524**	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisite: Practicing or licensed K-12 teacher

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	**545**	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**546**	Using Technologies for Presentations	Students create presentations appropriate for educational settings and electronic portfolios on CD-ROMs using scanners, digital/video cameras, and multimedia software. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**547**	Technology in Language Arts and Social Studies Education	Examines numerous ways technology is used to enhance teaching and learning in language arts and social studies classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**548**	Technology in Mathematics and Science Education	Examines numerous ways technology is used to enhance teaching and learning in mathematics and science classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**549**	Using the Internet and Case Studies to Solve Educational Problems	Provides a model of the use of distance education technologies.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**555**	Advanced Web Site Design and Development	Prepares technology leaders to design and create interactive school and district Web sites.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**556**	Managing School Information Systems	Applied course based on constructivist theory that examines the techniques and strategies of networking information systems within educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**575**	Critical Issues in Technology	Exploration and critical analysis of theoretical issues related to using technology in education. Students do literature reviews for EDT 593.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
EDT	**180**	Computer Literacy	Introduces personal computer operations and their place in society. Problem-solving approaches using databases, spreadsheets, and word processing. Credit is allowed for only EDT 180 or 321.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	CS	Students may not sign up for EDT 180 who have received a C or better in EDT 321.
EED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**511**	Principles of Curriculum Development	Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of conceiving and effecting change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**526**	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**529**	Science in the Elementary School	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**530**	Outdoor/Environmental Education	Use of various outdoor settings as laboratories for classroom-related experience, study, observation, inquiry, research, and recreation. Includes strategies and materials for developing environmental literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
EED	**537**	Mathematics in the Elementary School	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**538**	Teaching Social Studies with Literature	Develops the rationale, resources, and strategies for adopting a literature-based approach to social studies teaching in grades K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**581**	Diagnostic Practices in Mathematics	Specific skills in diagnosing and treating children's learning difficulties in mathematics. Includes practicum experiences, both on and off campus, in identifying strengths and weaknesses and initial remediation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**720**	Language in Education	Sociolinguistic seminar on language issues in education, including language acquisition, classroom interaction, language attitudes, relation language, and class-gender ethnicity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**730**	Discourse Analysis in Education	Surveys issues in and approaches to discourse analysis in educational research, with focus on students' projects using discourse analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**521**	Instructional Planning and Management in the Inclusive Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**531**	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**576**	Field Experience	Applies course content in elementary classrooms: observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**578**	Student Teaching in the Elementary School	Student teaching in elementary education setting for students in the MEd with Concentration in Teacher Certification.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**579**	Apprentice Teaching in Elementary Education	Apprentice teaching in elementary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
EED	**324**	Social Studies in Elementary Schools	Social studies education standards, curriculum, and instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**397**	Field Experience II	Observation, instruction, and management of small groups and the whole class. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**411**	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**412**	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**414**	Elementary School Curriculum and Organization	Rationales for instructional curricula; alternative curriculum designs and broad-based content; selected topics in school governance, finance, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Co-requisites: Elem Ed student, EED 411, EED 412, RDG 413 and EED 496 OR PDS (Professional Development School) student
EED	**433**	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management, and assessment practices. Lecture, discussion, lab.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	**464**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**478**	Student Teaching in the Elementary School	Student teaching in elementary school classrooms, Synthesized experience in curriculum, instruction, and classroom management	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**479**	Capstone Seminar in Elementary Education	Reflective, experienced-based integration of theory and practice; professional development for K-8 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**492**	Honors Directed Study	Honors Directed Study	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Must be an Honors student
EED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisite: Must be an Honors student
EED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**496**	Field Experience III	Applies course content in a K?8 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7	L	Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EEE	**101**	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	2.		
EEE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		
EEE	**202**	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: EE student with Intro to ES; Pre/Co-requisite: PHY 131 and MAT 274 or 275 (with C or better if completed) OR Non-EE student with any Intro to Engr, Pre/Co-requisite: PHY 131 and MAT 274 or 275
EEE	**203**	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in EEE 202 (or currently enrolled) or EEE 302 AND a grade of C or better in MAT 242, 342 or 343 or be co-enrolled in MAT 242, 342 or 343.
EEE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in CSE 100 or CSE 110 or CSE 200 AND a grade of D or better in CSE 120 or EEE 120.
EEE	**241**	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: MAT 362 and PHY 131 with C or better or currently enrolled; ECE 201 with D or better OR MAT 267 or 272 and MAT 274 or 275 and PHY 131 with C or better or currently enrolled; EEE 202 with D or better or currently enrolled
EEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**304**	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a grade of D or better or be currently enrolled in EEE 203
EEE	**333**	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND grade of D or better in CSE101,ECE100,200,EEE101 AND grade of D or better in CSE120 or EEE120 or be currently enrolled.
EEE	**334**	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student and a grade of D or better in ECE201 or EEE202
EEE	**335**	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Gate sizing, timing analysis, sequential digital circuits. Amplifiers, multi-stage op-amps, A/D, D/A converters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; Must have completed EEE 334 or ECE 334 with a grade of D or better or be currently enrolled in EEE 334

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EEE	**341**	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE student; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203; EEE 241 completed with D or better (or MAT 362 completed with a grade of C or better) or currently enrolled in EEE 241
EEE	**350**	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203, EEE 303 or MAE 317 completed with a D or greater or currently enrolled in EEE 203 or MAE 317 or co-enrolling in EEE 203 OR Graduate Engineering students
EEE	**352**	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE students; MAT 362 with C or better or EEE 241 with a D or better or currently enrolled; PHY 241 or 361 with a C or greater or currently enrolled; CHM 114, 115, 116 or 118 with a D or greater or currently enrolled
EEE	**360**	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student; EEE 202 or ECE 201 completed with a D or better or currently enrolled in EEE 202; EEE 241 completed with a D or better or currently enrolled OR Graduate Engineering student
EEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**404**	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 (or EEE 303) with D or better; EEE 230 (or CSE 230, EEE 225 or EEE 226) with D or better
EEE	**407**	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a D or greater or currently enrolled in EEE 203; MAT 342 or 343 completed with a C or greater or currently enrolled
EEE	**425**	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or better or currently enrolled
EEE	**433**	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or greater or currently enrolled
EEE	**434**	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 241 or EEE 340 completed with a grade of D or better or currently enrolled in EEE 241; EEE 352 or ECE 352 completed with a grade of D or better or currently enrolled in EEE 352
EEE	**435**	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Must be an Engineering BS/BSE student AND earn a grade of D or better in EEE 436 or be co-enrolled in EEE 436.
EEE	**436**	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 352 or ECE 352.
EEE	**437**	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 436 with D or better
EEE	**439**	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 435.
EEE	**443**	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 341 with D or better
EEE	**445**	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**448**	Fiber Optics	Principles of fiber-optic communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**455**	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE; EEE 350 completed with a D or better or currently enrolled; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203
EEE	**459**	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE and a grade of D or better in EEE 202 or 203.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	**460**	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in PHY241, 294 or 361 OR a grade of D or better in CHM114, 115 or 116 and a grade of C or better in MAT 274 or 275 and a grade of C or better in PHY241 or 361.
EEE	**463**	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; CHM 114 or CHM 116 with D or better or currently enrolled; MAT 274 or MAT 275 with C or better or currently enrolled; MAE 240 (or ECE 340) with D or better or PHY 241 with C or better or currently enrolled
EEE	**470**	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**471**	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**472**	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisite: BS/BSE Engineering Students; EEE 203
EEE	**473**	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**480**	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in EEE203 or MAE318 or be currently enrolled.
EEE	**481**	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203 and EEE 230 (or CSE 230) with D or better or only MAE 318 with D or better
EEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**488**	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE student; ENG 102 (or 105 or 108), EEE 241, EEE 350, EEE 334, and 4 courses from EEE 304, 333, 335, 341, 352 or 360, all with D or better
EEE	**489**	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE students; EEE 488 with D or better or be currently enrolled. Seniors or PostBacc undergraduates only.
EEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-6		Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	0-6	L	Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering BS/BSE student and a grade of D or better in EEE 433.
EEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-7		Pre-requisites: Engineering BS/BSE students only.
EEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		Pre-requisites: Senior Electrical Engineering BSE students only.
EEE	**505**	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students only.
EEE	**506**	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**507**	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**508**	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	**509**	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**510**	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**511**	Artificial Neural Computation Systems	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in CHE 518, MSE 518, or MSE 475 you may not enroll in EEE 518
EEE	**523**	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**524**	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**525**	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**526**	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**527**	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG/MS/MSE/PHD/MCS students OR Science & Engr Of Materials students AND a grade of C or better in EEE 523.
EEE	**530**	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**531**	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**532**	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or be currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**533**	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**534**	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**535**	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**536**	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**537**	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**538**	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**539**	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**540**	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**541**	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**543**	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	**544**	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**545**	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**546**	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**547**	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**548**	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**549**	Lasers	Theory and design of gas, solid, and semiconductor lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**550**	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**551**	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**552**	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**553**	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**554**	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**555**	Modeling and Performance Analysis	Modeling and performance analysis of stochastic systems and processes such as network traffic queueing systems and communication channels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**556**	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**557**	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**558**	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**562**	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**563**	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**564**	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**571**	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**572**	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**573**	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**574**	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**575**	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate Engineering student
EEE	**577**	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**579**	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**581**	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**582**	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**585**	Digital Control Systems	Analysis and design of digital and sampled data control systems, including sampling theory, z-transforms, the state transition method, stability, design, and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**586**	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**587**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**588**	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Master of Engineering or Electrical Engineering MS/MSE/PHD students
EEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students, or Nuclear Power Generation Certificate
EEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		

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EEE	**606**	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**607**	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**625**	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**627**	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**631**	Heterojunctions and Superlattices	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**641**	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**643**	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**647**	Microwave Solid-State Circuit Design II	Practical design of microwave free-running and voltage-controlled oscillators using Gunn and Impatt diodes and transistors; analysis of noise characteristics of the oscillator.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**686**	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, Electrical Engineering MS/MSE/PHD students
EEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**731**	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Electrical Engineering PhD students
EEE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EEE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**301**	Electric Circuit Analysis II	Analysis of continuous-time signals and linear systems of using Laplace and Fourier response of circuits.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; EET 208 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**304**	Transmission Lines in Computer Networks	Theory and application of transmission lines in high-speed computer networks. Signal propagation and impedance matching.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		
EET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**396**	Professional Orientation	Technical, professional, economic, and ethical aspects of electronics/computer engineering technology practice and industrial organization.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
EET	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; MAT 262 or MAT 272 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**403**	PLCs, Sensors and Actuators	Applications, programming, and troubleshooting using PLCs. Interfacing to motors, sensors, and actuators. Fluid power principles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**406**	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3-4		Pre-requisites: EST 310 and MAT 267(or MAT 272). If you have credit for EET 506, you may not enroll in EET 406
EET	**407**	Energy Conversion and Applications	Electricity, magnetism, mechanics, heat and units, and three-phase circuits. Electrical machines, transformers, generation, transmission, and distribution of electrical energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Must be Tech Sci or Engr BS/BSE/NonDegree AND Univ Cum GPA is 2.25 or greater AND must have earned D or greater in EET 208 or currently enrolled OR must be Tech Sci or Engr NonDegree, Tech Sci BAS/MS/MSTECH or Master Computing Studies
EET	**410**	Electronic Circuits II	Analysis and design of OP-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; EET 301 and EET 310 with D or better OR Technology and Innovation or Fulton Engineering graduate student or TS/ES non-degree student
EET	**430**	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Students who have credit for EET 530, may not enroll in EET 430
EET	**460**	Power Electronics	Analyzes circuits for control and conversion of electrical power and energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: EST 310
EET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**506**	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate status. If you have credit for EET 406, you may not enroll in EET 506
EET	**508**	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**530**	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Students who have credit for EET 430, may not enroll in EET 530

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EET	**560**	Industrial Electronics and Applications	Analysis, design, and application of special electronic devices and systems to industrial control, power, communications, and processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**578**	Digital Filter Hardware Design	Hardware design of FIR and IIR filters, including adaptive filters, based on DSP chips. Develop new applications using DSP microprocessor systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**579**	Digital Image Communication	Image capture, transform, compression, storage, and transmission. Provides computer environment (software and hardware) to emphasize the practical aspect.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EGR	**101**	Introduction to Engineering Design I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
EGR	**102**	Introduction to Engineering Design II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: EGR 101 and MAT 170; Pre or Co-requisite: ENG 101 (or ENG 105, 107 or 111)
EGR	**104**	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 101, ENG 105, or 107
EGR	**126**	Engineering Applications of MATLAB	Using MATLAB to solve engineering problems; problem solving; computational and programming uses of MATLAB.	N	STO	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 with D or better
EGR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**201**	Fall Multidisciplinary Project	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**202**	Spring Multidisciplinary Project	Design, problem solving, and engineering practice developed in a multidisciplinary project setting. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**220**	Computer Hardware for Engineers	Computer architecture, types of memory, operating systems and interrupts, buses and multiplexing, error detection and correction, Internet, the Web, encryption.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**221**	Engineering Mechanics: Statics	Introduces the concepts of force, moment, and their relationships to the static equilibrium of a physical object.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**222**	Mechanics of Materials	Behavior of solid bodies subjected to loading. Stresses, strains, and displacements in bodies Analysis and design in solid mechanics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**223**	Engineering Thermodynamics	Heat; conservation of energy; first and second laws of thermodynamics; open and closed systems; entropy, enthalpy, and internal energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and CHM 113
EGR	**224**	Engineering Materials Selection	Methods of selecting materials for specific applications based on mechanical loading, electrical, thermal, and environmental constraints.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102 and PHY 121
EGR	**225**	Instrumentation I	Introduces instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher; EGR 102
EGR	**226**	Engineering Applications of LabView	Uses LabView to solve engineering problems; problem solving, data acquisition, and control using LabView.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**227**	Manufacturing Processes I	Overview of manufacturing processes, including operating principles, process selection, and production economics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102
EGR	**229**	Engineering Ethics and Professionalism	Case studies in engineering ethics and professionalism.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 101 and ENG 101
EGR	**230**	Fluid Mechanics	Fluid properties, fluid statics, fluid continuum systems, control volumes, boundary control surfaces, energy and momentum, hydraulics, pipes, open channels, turbomachines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221
EGR	**231**	Engineering Mechanics: Dynamics	Rectilinear and planar motions of a particle and their relationships to the forces on it.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**234**	Structure and Properties of Engineering Materials	Relationships among material structure, processing, and properties. Mechanical, electrical, and magnetic properties. Corrosion.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: CHM 113; MAT 170 or higher
EGR	**235**	Instrumentation II	Frequency domain analysis of instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 225 and APM 265 (or APM 270, or MAT 265, or MAT 270)
EGR	**238**	Feedback Control	Introduces modeling, analysis, and design of feedback control systems, including block diagrams, transient responses, and linear controllers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**239**	Engineering Economics	Economic dimensions in the evaluation of engineering alternatives. Income and cash flow. Time value of money. Cost/benefit analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102; MAT 170 or higher

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EGR	**280**	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites: APM 265, APM 270, MAT 265 or MAT 270
EGR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**301**	Fall Concentration Project	Design, communication, and critical thinking developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**302**	Spring Concentration Project	Design, engineering practice, and communication developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 102, EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**311**	Computer Aided Design for Land Development	Computer-aided design, 3D AutoCAD, drafting methods and drawing formats for land development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 301
EGR	**322**	Soils Engineering for Land Development	Soils engineering; soil classification, properties, and stresses; design and analysis of seepage, slopes, and foundations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 302
EGR	**324**	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment; structural modeling, analysis, and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 221; EGR 222
EGR	**331**	Electrical Implementation Technology	Conducting electrical projects using the facilities of the ASU Polytechnic campus. Juniors majoring in engineering or technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 or EET 301
EGR	**332**	Electrical Power and Heat	Generation and distribution of electrical power within localized systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**333**	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**335**	Instrumentation III	Noise in electrical systems and associated limits on instrumentation and measurement.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235
EGR	**336**	Introduction to Mechatronics	Pneumatic, hydraulic, mechanical, and electrical actuators. Models of mechatronic systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 231, EGR 235 and EGR 238
EGR	**337**	Remote Sensing and Imaging Principles	Remote sensing and imaging principles with a focus on land development applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): CHM 113; EGR 280; MAT 267, MAT 272, or MAT 294/APM 294-Mathematics of Change III
EGR	**339**	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli¿s equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: PHY 111 or PHY 121 with D or better; APM 266, APM 271, MAT 266 or MAT 271 with D or better
EGR	**341**	Testing and Failure Prevention	Testing behavior of engineering materials under various loads. Evaluation of causes, mechanisms, and prevention of failure in structures and components.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**342**	Computer-Aided Engineering	Theory and use of computer tools for high-level engineering analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**343**	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 221 and EGR 222
EGR	**346**	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 343
EGR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**401**	Engineering Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.	L	Pre-requisites: EGR 301 and EGR 302
EGR	**402**	Engineering Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Prerequisite(s): EGR 401 taken within one previous term
EGR	**423**	Land Development Engineering I	Identifies engineering issues in land development. Introduces site design, transportation planning and traffic engineering, roadway design, and environmental engineering. The role of the engineer in the design of the planned environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Co-requisite: EGR 401
EGR	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 340; Students who have credit for MET 432, may not enroll in EGR 432
EGR	**433**	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275; MAT 342 or MAT 343
EGR	**434**	Digital Signal Processing: Media Standards	Introduces signal compression and reconstruction; audio, image, and video media standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**435**	Digital Signal Processing: Filtering	Introduces digital filtering, FIR and IIR filters, filter design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**436**	Wireless Communication Principles	Introduces wireless digital communications systems; overview of important concepts, including coding, modulation, equalization, decoding, and multiple access protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**437**	Wireless Communication Protocols	Surveys commercially important digital wireless protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433

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EGR	**438**	Electromagnetic Compatibility and Interference	Electromagnetic compatibility and interference. Grounding and shielding techniques. Cables, connectors, and leads. Regulations and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 and PHY 331
EGR	**445**	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 301 or EGR 302
EGR	**492**	Honors Directed Study		N	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-6		
EGR	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
EGR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1.		
ELL	**515**	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELL	**516**	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**501**	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**502**	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport. Prerequisite: ELS 501 or Instructor Approval.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: ELS 501
ELS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
ELS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ELS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EN	**106**	Lit Apprec		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
EN	**584**	Internship		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
ENE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

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ENE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
ENE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**111**	Learning Community Composition I	Discovering, researching, and developing ideas in relation to the writer's purpose, subject, and audience. Only taught within a Liberal Arts (CLAS) Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**112**	Learning Community Composition II	Critical reading and writing; emphasis on rhetorical strategies of argumentation. Requires research paper. Only taught within a CLAS Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 101 or ENG 111 with C or better
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**197**	Medical Writing	For students in the MedStart summer program. Designed to further critical thinking, reading, and writing skills for students interested in a medical career.	N	LEL	N	GNA	Liberal Arts and Sciences	Department of English	3.		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**302**	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**307**	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210 with C or better
ENG	**312**	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**313**	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**315**	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**325**	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**326**	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**330**	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**331**	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**342**	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**345**	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**355**	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**356**	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**370**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Must have 35 or more earned hours. Students who have credit for BIO 315, may not enroll in ENG 370
ENG	**371**	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
ENG	**372**	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**374**	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**385**	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & H	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**413**	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 with C or better. Students who have credit for LIN 517, may not enroll in ENG 413
ENG	**414**	Studies in Linguistics	Relationship of linguistics to literature, gender, power, and other social issues.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisite: ENG 200 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**416**	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**419**	English Literature in the Early 17th Century	Topics, authors, and themes in English literature, 1603-1660.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**422**	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**426**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ENG	**427**	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**428**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ENG	**429**	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**430**	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**434**	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**436**	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**442**	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**444**	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**445**	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**447**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200; ENG 200-level literature course,or SLC 202, or FMS 100; FMS 200 . Students who have credit for SLC 450 or FMS 442 may not enroll in ENG 447
ENG	**448**	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**452**	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**453**	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**458**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
ENG	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**465**	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**469**	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**470**	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**474**	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**475**	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & G	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**480**	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**487**	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Poetry or ENG 387 with C or better; Students who have credit for ENG 411 Poetry may not enroll in ENG 487
ENG	**488**	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Fiction or ENG 388 with C or better; Students who have credit for ENG 411 Fiction may not enroll in ENG 488
ENG	**490**	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Poetry or ENG 487 with C or better; Students who have credit for ENG 495 Poetry may not enroll in ENG 490
ENG	**491**	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Fiction or ENG 488 with C or better; Students who have credit for ENG 495 Fiction may not enroll in ENG 491
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**495**	Literary Forms: Theory and Practice	Types, history, analysis of traditional forms and contemporary adaptations. Separate sections for poetry, fiction. Each genre may be taken once.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411 with C better
ENG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**502**	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**503**	Comparative Literature, Theory, and Practice	Problems, methods, and principles of comparative analysis, illustrated by selected critical essays and literary/cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**504**	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**505**	Writing Workshops	Intense poetry and fiction workshops for experienced writers, emphasizing individual style. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**506**	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**507**	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 480, may not enroll in ENG 507
ENG	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**530**	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**531**	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**532**	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**533**	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**534**	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**535**	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**536**	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**537**	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**538**	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**539**	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**540**	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**542**	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**543**	Studies in Anglophone Literatures	Selected topics, texts, periods, literary trends in works by world authors writing in English.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**544**	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**545**	Studies in Women's Literatures	Selected topics, texts, periods, and figures in works written by and/or about women, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**546**	Gender Studies	Selected topics, periods, and themes in the study of gender and sexuality, including attention to theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**550**	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**551**	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**552**	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**553**	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**554**	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**556**	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**560**	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**561**	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**562**	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**563**	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

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ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		
ENG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**597**	MA Capstone Seminar	The capstone seminar is required for MA students who choose the non-thesis option, which can consist of writing a research paper, designing curriculum, or developing a professional portfolio. Requires oral presentation of project.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
ENG	**602**	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**603**	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**604**	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**606**	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**632**	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**635**	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**636**	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**639**	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**642**	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**645**	Advanced Studies in Gender Issues	Seminar courses that consider the influence of gender on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**651**	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**652**	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**654**	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**661**	Advanced Studies in Film	Seminar courses on topics, genres, and figures in film studies, including technical and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**662**	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**663**	Fiction Genres	Creative writing courses in time and fiction, gothic fiction, myth in fiction, science fiction, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**664**	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**665**	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**667**	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
ENG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)

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ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**305**	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**323**	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**386**	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisite:must have completed ENG 102, or 105, or 108 with a grade of C or better; or be currently enrolled in ENG 102, 105, or 108
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & H	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**410**	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**431**	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**432**	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**433**	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**437**	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**438**	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**450**	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**454**	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**455**	Contemporary Women Writers	Critical examination of literature by contemporary women writers. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**460**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**462**	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**463**	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**477**	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**230**	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**243**	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**244**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**320**	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**344**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**366**	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**367**	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**368**	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**373**	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**375**	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**376**	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**377**	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**378**	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**379**	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**382**	Digital Project Management for Humanities and Arts	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**383**	Digital Media in the Humanities and Arts	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**464**	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**466**	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**467**	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**468**	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**481**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Students who have credit for ENG 581, may not enroll in ENG 481
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**483**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
ENG	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**581**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for ENG 481, may not enroll in ENG 581
ENG	**583**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
EPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPA	**795**	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
EPD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EDP 710, EDP 712 or EDP 714 with C or better
EPD	**710**	Current Research in Design	Review and critical evaluation of contemporary literature and method in architecture, building science, interior design, industrial design, and landscape architecture. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**712**	Current Research in Planning	Review and critical evaluation of contemporary literature and method in environmental planning, landscape ecology, urban design, and urban and regional planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**714**	Current Research in History, Theory, and Criticism	Review and critical evaluation of contemporary literature and method in the theory and history of architecture, design, and planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EPD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
EPD	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		
EPD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
ESS	**501**	Environmental Social Science Theory and Practice I	First part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**502**	Environmental Social Science Theory and Practice II	Second part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**510**	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**513**	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ESS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ESS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ESS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
EST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**200**	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		Pre-requisites: Sophomore standing
EST	**210**	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJT's, FETs, op-amps.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	**310**	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210
EST	**345**	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200
EST	**370**	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200; EST 210; UET 331
EST	**372**	Wireless Communication Systems	Components and signal processing for modern wireless communication systems, including major applications, problems, and new technologies.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: EST 310
EST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**482**	Industrial Practice: Internship/Co-Op	Specially assigned or approved activities in electronic industries or institutions. Requires report.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
EST	**490**	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
EST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Must have an University Cum GPA of 3.00 or greater; Must be a Tech Science or Engineering senior OR a Graduate, NonDegree or Post Bacc student
EST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
ETH	**100**	Introduction to Ethnic Studies	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	
ETH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**300**	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	
ETH	**310**	Research Methods in Ethnic, Racial, and First Nations Populations	Examines analytical tools and methodological approaches (ethnography, oral histories, digital-storytelling, information literacy) to study ethnic, racial, and first nations populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
ETH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ETH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ETM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**301**	Environmental Management	Focuses on knowledge and skills necessary to manage environmental programs. Perspectives include regulatory, individual, corporate, and consulting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**302**	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**303**	Environmental Regulations	Explores environmental laws, regulations, and directives. Addresses air, land, and water.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**360**	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**362**	Managing Natural and Technological Disasters	Federal, state, and local responses to emergencies. Management of mass casualties, evacuation, sheltering, and terrorism; declaration of emergency procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources. Cross-listed as FSM 363. Credit is allowed for only ETM 363 or FSM 363.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**364**	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**401**	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**402**	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**406**	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**407**	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-E**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-M**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-E**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-M**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**428**	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	
ETM	**460-E**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**460-M**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**461**	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy. Credit is allowed for only ETM 461 or 561. Prerequisite: junior or senior standing or instructor approval.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**468**	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**469**	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**501**	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**502**	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**503**	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**504**	Technology for Storage, Treatment, and Disposal of Hazardous Materials	Current and state-of-the-art technologies and future trends for storage, treatment, and disposal of hazardous materials and waste.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**505**	Quantitative Analysis and Practical Laboratory Techniques	EPA methodologies for sampling and analysis of soils and water. Includes quality assurance and regulatory requirements. Lab is arranged off site.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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ETM	**506**	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**507**	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**520**	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**522**	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**523**	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**524**	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**525**	Risk Assessment for Hazardous Materials	Applies the risk assessment process in situations ranging from hazardous facilities regulation to toxic substances in the environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**526**	Current Environmental Technology Issues	In-depth study of current issues in environmental technology facing both the private and public sectors.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**527**	Environmental/Resources Regulations Concepts	Develops environmental regulations from common law to statutory requirements. Emphasizes Superfund, hazardous materials, toxics, and liability contracts.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**528**	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**540**	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**560**	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**561**	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program. Credit is allowed for only ETM 561 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**567**	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**571**	The Foundations of Homeland Defense and Security	The enemy, policies, key players, and legal issues surrounding homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**572**	Multidisciplinary Approaches to Homeland Defense and Security: Collaborating to Integrate	Multidisciplinary approach to prevention, mitigation, preparedness, response, and recovery from incidents of national significance.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**573**	Strategic Planning and Organizational Imperatives in Homeland Defense and Security	Efforts to integrate and mobilize government and private sector resouces for homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**574**	Special Topics in Homeland Defense and Security	Discusses contemporary challenges of asymmetric warfare, terrorism, and the virtual global battlespace, as well as emerging threats to homeland security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ETM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
ETM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
EVO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
EVO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**601**	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**610**	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EVO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
EVO	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EXW	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
EXW	**105**	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week. fee	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**205**	Physical Activity Instruction: Intermediate	Intermediate-level instruction in a variety of physical activities. Continuation of EXW 105. Y grade only. May be repeated for credit. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must have completed EXW 105 with a C or greater
EXW	**212**	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	**214**	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major.
EXW	**215**	Physical Activity and Healthy Lifestyles	Applies principles of physical activity to personal fitness testing and program planning for people of all ages. Telecampus course. Not open to Exercise and Wellness majors or to students with credit ib EXW 325.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Non-EXW students; Credit is allowed for only EXW 215 or EXW 325
EXW	**216**	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Exercise and Wellness or Physical Education major
EXW	**300**	Foundations of Exercise and Wellness	Principles and foundations of fields of study related to health promotion, physical activity, and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: EXW 100 or KIN 100 with a D or better, or co-enrolled in EXW 100 or KIN 100

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**302**	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	
EXW	**305**	Physical Activity Instruction: Advanced	Advanced-level instruction in a variety of physical activities. Continuation of EXW 105. May be repeated for credit. Y grade only. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**310**	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-heath consumerism, and statistical analysis.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: Must be a Exercise Wellness student; must have completed MAT114, MAT117, MAT119, MAT142 or MAT170 with a C or greater
EXW	**311**	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**315**	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 and BIO 202 with C or better
EXW	**320**	Program Development and Leadership	Principles of planning, organizing, promoting, and leading fitness and wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**322**	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
EXW	**325**	Fitness for Life	Physical fitness and benefits of exercise with emphasis on self-evaluation and personalized program planning for a lifetime. Not open to students with credit in EXW 215 or 301.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students may not sign up for EXW 325 who have received a D or better in EXW 215 or EXW 301
EXW	**330**	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 with C or better
EXW	**335**	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementaion of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 and 202 with C or better
EXW	**342**	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**346**	Health Promotion and Program Evaluation	Introduces and applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 300 with C or better; EXW 342 with C or better
EXW	**350**	Substance Abuse and Addictive Behavior	Studies addictive substances, their pharmacology and effects. Psychosocial risk factors for, and consequences of, substance abuse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**380**	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: PGS 101 with a C or better; 30 credit hours or more
EXW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**400**	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**420**	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**425**	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 315 with C or better; EXW 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	**442**	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites:EXW 300 with a D or better
EXW	**444**	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 300 and EXW 310 with a C or greater
EXW	**450**	Cultural and Social Issues in Exercise and Wellness	Examines contemporary sociocultural issues and social determinants of health and physical activity. Focuses on health disparities, obesity, and social stressors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	(L or SB) & C	Pre-requisites: PGS 101 and EXW 300 with C or better
EXW	**460**	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	FLD	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Exercise and Wellness concentration students with EXW 400, 420, and 425 with C or better or EXW Health Promotion concentration with EXW 346, and 444 with C or better
EXW	**492**	Honors Directed Study		N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
EXW	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
EXW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**501**	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**505**	Applied Exercise and Wellness Laboratory Techniques	Investigative techniques used in the applied exercise testing/prescription lab. Emphasizes cardiorespiratory assessment, energy balance, body composition, and electrocardiography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**534**	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**536**	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**538**	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**540**	Psychosocial Issues in Exercise and Wellness: Stress, Coping, and Resilience	Critically explores the impact of psychological and social factors on human wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**542**	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**544**	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**635**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**640**	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**641**	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**642**	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 500 and EXW 501 with a C or greater
EXW	**643**	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**645**	Biostatistics in Physical Activity, Nutrition, and Wellness	Introduces biostatistical methods in physical activity, nutrition, and health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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EXW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**701**	Research Methods for Community-Based Interventions	Develops skills to design and conduct community-based research interventions, identify essential elements of program fidelity, analyze quasi-experimental research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
EXW	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
EXW	**218**	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	Nursing & Health Innovation	Department of Exercise and Wellness	2.		Pre-requisite: Exercise and Wellness or Secondary Education (Physical Education) major
FAS	**101**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(L or SB) & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
FAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**361**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390 (or equivalent) completed with D or better or currently enrolled. Credit is allowed for only FAS 361 or SOC 391
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
FAS	**390**	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**431**	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for SOC 435, may not enroll in FAS 435
FAS	**440**	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisite: Must be an Honors student
FAS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
FAS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
FAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**503**	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	DIS	N	GNA	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**531**	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**539**	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**570**	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**571**	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**572**	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**573**	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**574**	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**575**	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**576**	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**577**	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**578**	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**579**	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**581**	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
FAS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
FAS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**421**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421
FAS	**436**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**445**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	
FIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**300**	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ACC 241 or 242 or 271, and ECN 221 and ECN 212 with a grade of C or better.
FIN	**301**	Fundamentals of Finance	Introduces the basic concepts, principles, and tools of financial management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status; ACC 240, ECN 112 and QBA 221 with C or better
FIN	**302**	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W. P. Carey Finance major; ACC 241 or 242 or 271, ECN 221 and ECN 212 with a grade of C or better.
FIN	**303**	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; Must have ACC 241 or 271 , ECN 211 or 213, ECN 212 or 214, ECN 221 and MAT 211 or 271 with a grade of C or better.
FIN	**331**	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 241 or 242 or 271, ECN 212, and ECN 221 with C or better
FIN	**361**	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 302 with C or better
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Non-Finance students; Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree seeking student
FIN	**410**	Investments	Strategies and mechanics of investing in stocks, bonds, and derivatives. Topics include investment selection, portfolio management, financial markets, and institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Management student with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better
FIN	**411**	International Finance	Explores the environmental challenges facing financial managers in global financial markets and develops tools and techniques to meet such challenges.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt OR Int' Studies student; FIN 300 or 301 with C or better; GLB 301 with C or better
FIN	**412**	Financial Management	In-depth extension of core finance course. Typical topics include financial planning/control, risk and valuation, capital budgeting.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better; ACC 236 or 410 with C or better
FIN	**421**	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 303 or 361) with C or better
FIN	**427**	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	**431**	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**456**	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	G	Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**461**	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	L	Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**481**	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student with Honors status; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Finance	1-6		Pre-requisites: Must be an Honors student
FIN	**493**	Honors Thesis		N	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Pre-requisites: Must be an Honors student
FIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		
FIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	**502**	Managerial Finance	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Pre-requisites: ACC 502 with C or better; ECN 501 with C or better
FIN	**520**	Financial Modeling	Demonstrates how Excel programming techniques can be used to model and manipulate financial data, as applied to equities, options on equities, and options on bonds.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**521**	Investment Management	Valuation of equities and fixed income securities. Trading strategies and portfolio management. Performance evaluation. Trading mechanisms and market organization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**525**	Investment Strategies	Introduces theories and practices of the investment process. Covers the fundamental principals and applications of modern portfolio theory, risk-return relation, asset pricing models, investment performance evaluation, and stock and bond valuation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**527**	Derivatives and Risk Management	Characteristics and pricing of forwards, futures, swaps, options. Applies instruments for hedging strategies, corporate risk management, and capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**530**	Derivatives	Covers options, forward contracts, futures contracts, and swaps. Provides a good knowledge of how these contracts work, how they are used, and how they are priced.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**531**	Financial Markets and Intermediaries	Short-term and long-term fixed-income securities and their marketplaces, tools for bond portfolio and interest rate risk management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**540**	Financial Markets and Instruments	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**550**	Fixed Income Securities	Describes important fixed income securities and markets, and develops tools for valuing fixed income securities and managing interest rate risk. Covers traditional bonds and term structure concepts as well as fixed income derivatives and interest rate modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**551**	Applied Fundamental Analysis	Analysis of financial documents to determine quality of earnings. Forensic financial analysis to diagnose financial health and sustainable growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 and ACC 502 with a grade of C or greater or be currently enrolled
FIN	**556**	International Financial Management	Behavior of exchange rates, interest rates, inflation rates. Analyzes corporate exposure to exchange rate risk and hedging strategies. Multicurrency capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater or be currently enrolled

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FIN	**560**	International Finance and Investments	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**561**	Strategic Financial Management	Capstone case-oriented course in strategic applications of corporate finance. Acquisition, allocation, and management of funds within the business enterprise.	N	DIS	N	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**570**	Portfolio Strategies and Hedge Funds	Introduces the principles of asset valuation from an applied perspective. Valuation of financial securities and portfolio management applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**581**	Advanced Valuation Methods	Analyzes practical aspects of valuing the enterprise using economic value added, free cash flow, and other financial techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
FIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**781**	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		

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FIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1.		
FIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FMP	**201**	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	
FMP	**202**	Film and Media Production Crew	Provides opportunity to serve in various capacities on student film sets in order to obtain practical production experience. Practicum. Prerequisite: instructor approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
FMP	**220**	Final Cut for Filmmakers	Required 30-hour lab designed to teach students basic editing techniques utilizing the Final Cut Pro Suite of software.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisite: Film and Media Production student
FMP	**250**	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**300**	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	**318**	Directing for Film	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film and Media Production student; FMP 320 with C or better
FMP	**320**	Film and Media Post-Production	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be in Film and Media Production student; Completed FMP 300 (or THE 400) with a grade of C or better
FMP	**345**	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**417**	Business Ethics in Entertainment	Business and ethical practices of the entertainment industry; analysis of ethical decision-making techniques.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**480**	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	**481**	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**492**	Honors Directed Study		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
FMP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
FMP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor
FMP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Pre-requisites:Must be a Film & Media Production student
FMP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisite: Fine Arts Graduate student

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FMS	**100**	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**110**	Introduction to New Media	Explores the cultural effects of new media technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	
FMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**194**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	2.		
FMS	**200**	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & H	
FMS	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**209**	Screenwriting Fundamentals (online)	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Restricted to online Film and Media Studies students only
FMS	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**300**	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**302**	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**309**	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**312**	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**340**	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C & H	
FMS	**350**	Virtual Reality in Film and Media	Analyzes virtual reality in films, media, and fiction. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**351**	Emerging Digital Media	Analyzes modern cultural and digital technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L	Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**354**	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: FMS 100
FMS	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	**377**	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites:ENG 102(or ENG 105/108); FMS 100; FMS 309 with grades of C or better, or currently enrolled
FMS	**440**	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better

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FMS	**441**	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**442**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 200; ENG 200-level literature course, SLC 202 or FMS 100; FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
FMS	**450**	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**460**	Masculinity and Film	Examines the representation of masculinity and the male body in film. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**461**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**468**	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**480**	Globalization, Technology, and Culture	Studies the socio-political relationship between media and the evolution of globalization. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**481**	Entertainment Technologies	Applies academic and industry knowledge to simulate and to solve "real world" entertainment industry problems and needs.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**482**	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**483**	Techno-Entertainment Convergences	Uses historical and scientific methods to forecast future technological developments and use in the entertainment industry.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**490**	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
FMS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
FMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
FMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**502**	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	**507**	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**509**	Race, Sex, and Identity Online (Online)	This course is available online only. Investigates scholarly methods and studies focused on the intersection of race, gender, and sexuality online.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**511**	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**512**	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**520**	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	**521**	Semiotics of Popular Culture	Uses semiotics and cultural studies to uncover representations of alienation.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**522**	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FRE	**101**	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings. Credit is allowed for only FRE 101 or 111	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 101 if they have received a C or better in FRE101,102,201,202,205,311,312,321,322,411,412
FRE	**102**	Elementary French	See FRE 101. Credit is allowed for only FRE 102 or 111.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisite: FRE 101; May not sign up for FRE 102 if received a C or better in FRE 111,201,202,205,311,312,321,322,411,or 412
FRE	**107**	French for International Professions I	Accelerated alternative to FRE 101 and 102 or FRE 111. Functional approach. Emphasizes communicative competence for international professions. Credit is allowed for only FRE 107 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
FRE	**111**	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study. Credit is allowed for only FRE 111 or 101 or 102 or 107. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 111 if they have received a C or better in FRE 101,102,201,202,205,311,312,321,322,411,412
FRE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
FRE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**201**	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Student may not enroll in FRE 201 if received a C or better in: FRE202,205,311,312,321,322,411,412
FRE	**202**	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not sign up for FRE 202 if they have received a C or better in FRE205,311,312,321,322,411,412
FRE	**205**	Readings in French Literature	Designed to teach reading with facility and comprehension. Vocabulary building and textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: FRE 202: Students who have received a C or better in FRE 321 or 322, may not enroll in FRE 205
FRE	**207**	French for Business	Alternative to FRE 202. Functional approach. Emphasizes communicative competence for international professions. Not open to students with credit in FRE 202. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
FRE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**311**	French Conversation	Further practice in speaking French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 311, if they have received a C or better in FRE 411.
FRE	**312**	French Composition	Further practice in writing French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 312, if they have received a C or better in FRE 412
FRE	**315**	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 with a grade of D or better, or currently enrolled
FRE	**319**	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312 with a grade of D or better or currently enrolled
FRE	**321**	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & H	Pre-requisites:FRE 205, 312 with a grade of D or better or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	**322**	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:Completed FRE 205 & 312 with a grade of D or greater, or be currently enrolled
FRE	**325**	Introduction to French Film	Studies French artistic contribution from 1895 to present, with emphasis on recent films starting with the New Wave.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**411**	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 311 with a grade of D or currently enrolled & 6 hours of 300-level French
FRE	**412**	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312; 6 hours of 300-level French
FRE	**415**	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:6 hours of upper-division French
FRE	**416**	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	pre-requisites:6 hours of upper-division French
FRE	**421**	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 & 312 with a grade of D or better, or currently enrolled
FRE	**422**	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ASB 480, ENG 213 or SLC 400
FRE	**423**	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ASB 480, or ENG 213, or SLC 400, or SLC 201, or FRE 421 with D or better
FRE	**432**	Gay Identities in Modern French Literature	Examines the representation of homosexuals as well as the emergence of homosexuality as a theme in modern French literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of Dor better, and 6 hours of 300-level French courses
FRE	**441**	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**442**	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**445**	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**451**	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**452**	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**453**	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**461**	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**462**	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**471**	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**472**	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:9 hours of 300-level French courses with a grade of D or better
FRE	**480**	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 412 with a grade of D or currently enrolled
FRE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**485**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 480 with a grade of D, or currently enrolled
FRE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
FRE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
FRE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**510**	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**521**	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**531**	Medieval French Literature	Readings in the epics, early drama, Roman courtois, and other representative literary genres of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**535**	Identity, Gender, and Society in Early Modern French Literature	Readings in French Renaissance literature with special focus on Rabelais, Montaigne, Marguerite de Navarre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**585**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FRE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**790**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FSA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**502**	Managing Change in the Fire Service	Dynamics of organizational change and the effect change has on the delivery of fire services to the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**503**	Fire Service and the Community	Theoretical concepts of public service to build an understanding of how the fire service fits within the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student

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FSA	**510**	Fire Department Budgeting and Finance	Functions of budgeting and finance in fire departments within the context of the public sector.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**522**	Leadership in the Fire Service	Leadership theories analyzed in a variety of contexts within public and private organizations, then applied to the leadership challenges in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**530**	Public Policy in the Fire Service	Public policy and the fire services' role in the making of public policy in the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**540**	Applied Research Methods in the Fire Service	Research methods applicable to problems that arise in the fire service, including assessments of programs and customer service research.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**550**	Fire Service Program Management	Functions of developing and managing fire service programs. Designed for advanced students of fire service administration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**551**	Fire Prevention and Public Fire Education	Managing fire prevention organizations and administering fire prevention programs in a contemporary society.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**552**	Emergency Medical Services Administration	Complex issues of administering an Emergency Medical Services (EMS) division in a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**553**	Special Operations in the Fire Service	Focuses on the variety of special emergency services operations provided by contemporary fire departments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**554**	Emergency Fire Operations Administration	Delivery of emergency services to a community by a contemporary fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
FSA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
FSA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSE	**105**	College Adjustment and Survival	Explores career goals and majors. Emphasizes organization and development of study skills, including time management, stress management, and use of the library.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Freshman or Sophomore in the Ira A. Fulton School of Engineering
FSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**200**	Elements of Engineering Design	Advanced version of introduction to engineering for students who have not taken an introduction to engineering course. Credit is allowed for only FSE 200 or various program introduction to engineering courses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: A grade of C or better in PHY 121 or currently enrolled AND a grade of C or better in MAT 265 or 270.
FSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**301**	Entrepreneurship for Engineers	Overview of entrepreneurship, with emphasis on principles suitable for undergraduate engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: School of Engineering BS or BSE student; Minimum Junior standing
FSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: Engineering or Construction BS or BSE student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**399**	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisite: Engineering BS or BSE student
FSE	**400**	Creating and Launching a Technology Venture	Focuses on creative and logical processes involved in developing a business idea and investigating its market feasibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**401**	Intellectual Property for Technology Ventures	Provides basic understanding of legal issues likely to be encountered in a technology venture; practical approaches and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**402**	Operating a Technology Venture	Managing and leading technology ventures. Principles of organizing, planning, controlling, and leading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**403**	Entrepreneurship Practicum	Places students pursuing a Certificate in Technology Entrepreneurship with a practicing entrepreneur to learn about venture development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
FSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**501**	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	**502**	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**503**	Collaborative Innovation Management	Techniques and practices of collaboration innovation, including an indepth look at managing outsourcing relationships and "wikinomics."	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**504**	Corporate Venturing and Intrapreneurship	Explores how companies can create intrapreneurial cultures that lead to greater levels of corporate venturing and long-term competitiveness.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**590**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**594**	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: School of Engineering Graduate student
FSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**690**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**790**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSM	**304**	Fire Personnel Management	Promotion, personnel development, career and incentive systems, validation of physical requirements, managerial and supervisory procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**305**	Quality Emergency Services	Covers quality issues relating to services delivered by progressive fire departments. Covers management of personnel and resources during organizational change.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**306**	Fire Prevention Organization and Management	Examines and evaluates the techniques, procedures, programs, and agencies involved in preventing fires.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**307**	Fire Department Safety Organization and Management	Focuses on the management of fire department safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		
FSM	**308**	Fire Department Budgeting	Examines the role of fire department budgets and their relationship to other levels of government as a planning tool.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**309**	Emergency Medical Service Organization and Management	Focuses on the administration and management of emergency medical services delivered by a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**400**	Human Behavior and the Fire Threat	Proper ways of conducting post-fire interviews; emphasizes the psychological effects of communications during emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**401**	Labor Relations in the Fire Service	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**404**	Program Management and Accreditation	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**405**	Fire Service Leadership	Focuses on developing personal and organizational leadership qualities required to be successful in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**421**	Political and Legal Consideration in Fire Science	Study of legal and political considerations that affect the decision making of fire service managers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**425**	Fire Service Administration	Presents modern management and planning techniques that apply to organizing a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**460**	Incident Management Systems and Emergency Operations Center	Covers IMS, terminology, players, and management philosophy. EOC setup, activation, operation, and termination. EOC funding and politics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**493**	Honors Thesis	Capstone applied project. Applies knowledge learned from FSM course work to solve a practical fire service problem.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
FSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SB & G	
GCU	**141**	Introduction to Economic Geography	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**322**	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	**323**	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**325**	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**326**	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**327**	Geography of Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**328**	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**332**	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**344**	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	**350**	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**352**	Political Geography	Relationship between the sociophysical environment and the state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**359**	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G & H	

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GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	423	Geography of South America		N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	424	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	425	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or SB) & G	
GCU	426	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	432	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	433	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	441	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	442	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	444	Geographic Studies in Urban Transportation	Current urban transportation issues in metropolitan Phoenix. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	453	Recreational Geography	Examines problems surrounding the organization and use of space for recreation. Introduces geographic field survey methods of data collection and analysis.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	455	Historical Geography of U.S. and Canada	Geographical perspective on the evolution of the United States and Canada from pre-Columbian times to early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & H	
GCU	474	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	492	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	493	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**495**	Quantitative Methods in Geography	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: MAT 119, 170, 210 or 270
GCU	**496**	Geographic Research Methods	Scientific techniques used in geographic research. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GPH 370 with C or better
GCU	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies. Seminar.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**515**	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**516**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GCU 516, PUP 560 or SOS 560
GCU	**526**	Spatial Land-Use Analysis	Determination, classification, and analysis of spatial variations in land-use patterns. Examines the processes affecting land-use change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**529**	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**542**	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**585**	Advanced Research Methods in Geography	Specialized research techniques and methodologies in economic, political, or cultural geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SB & G	
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites:must have completed MAT 117, or 119, or 142, or 170, or 210, or be currently enrolled in one of these
GCU	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**361**	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**373**	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation. fee	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SG	Pre-requisite: PSY 230 or SBS 304
GCU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SB & G	
GER	**101**	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar. Credit is allowed for only GER 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**102**	Elementary German	See GER 101. Credit is allowed for only GER 102 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**111**	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study. Credit is allowed for only GER 111 or both GER 101 and 102. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
GER	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**201**	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**202**	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**311**	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays, and stories. 3 semester hours limit for majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**312**	German Conversation	See GER 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**313**	German Composition	Intensive practice in writing, emphasizing style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**411**	Advanced Grammar and Conversation	Improvement of diction and idiom through intensive oral review.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	**412**	Advanced Grammar and Composition	Improvement of writing ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:GER 313 with a grade of D or better or currently enrolled
GER	**415**	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**416**	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**421**	German Literature	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: 6 hours of 300-level German courses
GER	**422**	German Literature	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: 6 hours of 300-level German courses
GER	**453**	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	
GER	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
GER	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GER	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
GER	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**521**	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**523**	German Drama	Drama of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**527**	The Novelle	Special studies in the German short story.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
GER	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GIT	**110**	Technical Graphics	Representation of 2-D and 3-D geometry in orthographic, isometric, and oblique projection; detail, assembly, sectional, and auxiliary views; ANSI-standard lettering, and dimensioning for geometric and positional tolerance.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**135**	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**210**	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**212**	Computer-Aided Design and Drafting (CADD)	CADD for product design, representation, and documentation; includes projection theory, descriptive geometry, graphics analysis, drafting standards, and precision dimensioning techniques.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisite: GIT 110
GIT	**215**	Introduction to Graphics Programming	Graphic user interface planning and evaluation using industry-standard programming tools.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**230**	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**301**	Web Site Development for Nonmajors	Focuses on the basic skills necessary to successfully design or maintain a Web site; geared toward non-GIT majors.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**303**	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135, GIT 230
GIT	**312**	3-D Computer Graphics Modeling and Representation	3-D solid modeling applications: concepts, techniques, data structures, modeling strategies, assemblies, geometric representation.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisites: GIT 110, GIT 210, GIT 212
GIT	**313**	Technical Illustration and Photorealistic Rendering	Computer-generated graphics for technical illustration and design presentation: axonometric and perspective drawing; shading, shadowing, materials and textures; photorealistic rendering for PostScript output.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 110, GIT 230
GIT	**314**	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210, GIT 215, GIT 230
GIT	**333**	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digitial printing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: GIT 135, 230, 303
GIT	**334**	Image Capture and Manipulation	Theory and application of image capture techniques used for all copy formats and conversion processes required for reproduction or dissemination.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 230
GIT	**335**	Computer Systems Technology	Surveys computer-based technology covering hardware, software, storage, networking, Internet, telecommunications, and information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**337**	Web Content Design	Design principles for visual content on the World Wide Web using XHTML and CSS; raster, vector, fonts, portable documents, color palettes, and file format considerations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 210; GIT 215; GIT 230

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GIT	**352**	Technical Presentations	Technologies for planning, creating, and delivering individual and group presentations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**384**	Commercial Digital Photography	Digital image, conversion, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**411**	Computer Animation	2-D and 3-D computer animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210; GIT 312
GIT	**413**	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337. Pre or Co-Requisite: TWC 400
GIT	**414**	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**415**	Computer Graphics: Business Planning and Management	Implementation planning: feasibility and application studies; needs assessment and operational analysis techniques; organization, managerial, and technology considerations; business plan development.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**417**	Advanced Internet Programming	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**418**	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 215, GIT 230, GIT 214, GIT 417
GIT	**432**	Graphic Industry Business Practices	Business practices related to press/prepress/Web industries; trade customs, cost analysis, marketing and management approaches.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333; GIT 337
GIT	**435**	Web Management and E-Commerce	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 414
GIT	**436**	Gravure Technology	The technologies and processes involved in the production of gravure publications with an emphasis on the design, imposition, decoration, and finishing of packaging.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 334
GIT	**437**	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 334
GIT	**441**	Graphic Information Systems	Graphic information systems common to the workplace: graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**450**	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 337
GIT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	FLD	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**498**	Professional Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
GIT	**537**	Current Issues in Quality Assurance	Directed group study of selected issues relating to quality assurance in the printing, publishing, and graphic information industries. Requires graduate group leadership.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**538**	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**540**	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)

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GIT	**541**	Graphic Information Systems	Graphic information systems common to the workplace; graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**542**	Information Design and Usability	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**301**	Business in the Global Environment	Discusses multinational corporate strategy, structure, operations, and the social and economic factors affecting global business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.	G	Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status.
GLB	**302**	Culture and Diversity Management	Develops an understanding of culture (individual, organizational, national, subcultural, transnational, and global) and change and interaction applied to management decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3-4		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**303**	Relationship Management	Overviews types of relationships found in organizations, then trains students in the interpersonal skills necessary to effectively manage those relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**401**	Global Business Integration	Provides an integrative framework for global corporate strategic analysis and opportunities for integrated decision making in actual and simulated businesses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: Global Mgt student with professional status; Minimum 87 hours; OPM 301 and (FIN 300 or 301) with C or better; MKT 300 or 301 with C or better; GLB 303, HRM 410 or MGT 301 with C or better
GLB	**411**	Global Competitiveness	Discusses factors contributing to international competitive success of nation-states, national industries, and specific firms. Includes detailed analysis of actual firms.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.		Pre-requisites: School of Global Management and Leadership International Studies student with Professional or Conditional status; GLB 301 with C or better
GLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
GLB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-6		
GLB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
GLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: School of Global Management and Leadership International Studies student with Professional or Conditional status
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ & G	
GLG	**102**	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. fee. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & H	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
GLG	**104**	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	Co-requisite: GLG 102
GLG	**105**	Introduction to Planetary Science	Solar system objects and their geologic evolution, surfaces, interiors, and atmospheres; weekly lab for data analysis and experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SG	

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GLG	**106**	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SQ	
GLG	**108**	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.		
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & G	
GLG	**111**	Geologic Disasters Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	
GLG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**300**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Not open to Geology majors with credit in GLG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**304**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**310**	Structural Geology	Geologic structures and the mechanical processes involved in their formation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 101 AND either MAT 270 or MAT 290 with a grade of D or greater
GLG	**321**	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisites: CHM 113 and (MAT 270 or MAT 290); Pre/Co-requisite: CHM 116
GLG	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only BIO or GLG 325
GLG	**362**	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**400**	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	P/F	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in geological sciences. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	C	
GLG	**404**	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		

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GLG	**405**	Geology of the Moon	Current theories of the origin and evolution of the moon through photogeological analyses and consideration of geochemical and geophysical constraints. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**406**	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**410**	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	Pre-requisites: GLG 101 or SES 101 with C or better
GLG	**412**	Geotectonics	Earthquakes, Earth's interior, formation of oceanic and continental crust, and plate tectonics. Emphasizes current work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better
GLG	**416**	Field Geophysics	Methods of applied geophysical exploration; seismic refraction, gravity, electrical resistivity, geomagnetics. Includes survey planning, data acquisition, processing, analysis, and interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**418**	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better; MAT 272 (or MAT 267); PHY 131
GLG	**419**	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: PHY 131
GLG	**420**	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**424**	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 321 with C or better
GLG	**430**	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 102 (or SES 102) with C or better; GLG 104 (or SES 104)
GLG	**435**	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 102 and GLG 321 with a grade of C or greater
GLG	**441**	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**451**	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	**452**	Field Geology II	Continuation of GLG 451. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 451 and GLG 321 with C or better; MAT 270 or MAT 290 with C or better
GLG	**455**	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona. Fee.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		
GLG	**456**	Cordilleran Regional Geology	Systematic coverage through space and time of the geological development of western North America, emphasizing the western United States. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**470**	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**490**	Topics in Geology	Special topics in a range of fields in geology. Fee.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
GLG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**495**	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GLG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**500**	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**501**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**504**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**510**	Advanced Structural Geology	Mechanics of rock deformation, emphasizing relationship among field observation, theory, and experiment. Stress, strain, simple constitutive relationships, failure criteria, and the basis of continuum methods. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**520**	Advanced Physical Volcanology	Selected volcanologic topics, including explosive eruption processes, lava flow mechanics, and intrusive mechanisms. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2-3		
GLG	**547**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		You may not enroll in GLG 547 if you have credit in BIO 515, or PAF 547, or SOS 516
GLG	**581**	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**582**	Physical Geochemistry	Applies thermodynamic and kinetic principles to geochemical processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GLG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ & G	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG & G	
GPH	**111**	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants. Credit is allowed for only GPH 111 or 411. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**210**	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**211**	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	

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GPH	**212**	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SQ	
GPH	**213**	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SG	
GPH	**214**	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SQ	
GPH	**215**	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SG	
GPH	**271**	Maps and Map Reading	Map types, uses, limitations, and evolution. Communication via paper and digital medium. Navigation, interpretation, projections, sources, symbols, classification, case, handling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**314**	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & G	
GPH	**370**	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**371**	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**372**	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**373**	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	CS	Pre-requisite: GPH 370 with C or better
GPH	**381**	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**401**	Topics in Physical Geography	Open to students qualified to pursue independent studies.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in discpline. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	
GPH	**405**	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**409**	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**410**	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**411**	Physical Geography	Introduces physiography and the physical elements of the environment. Credit is allowed for only GPH 411 or 111.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**412**	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111, MAT 270, PHY 121, and PHY 122 with C or better

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GPH	**413**	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**414**	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**418**	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
GPH	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH or PLB 422
GPH	**433**	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**471**	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**473**	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: Must have completed both GPH 373 and CSE 100 with a grade of C or greater or be currently enrolled
GPH	**474**	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	**475**	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**481**	Environmental Geography	Problems of environmental quality, including uses of spatial analysis, research design, and fieldwork in urban and rural systems.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**483**	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**491**	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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GPH	**505**	Energy and the Environment	Sources, regulatory and technical controls, spatial distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**511**	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation: emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**533**	Snow and Ice	Processes, distribution, climatic interactions of snow/ice emphasizing mass balance, snow stratigraphy/metamorphism and glacier/snowpack climatology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**573**	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**575**	Geographic Applications of Remote Sensing	Uses imaging and nonimaging methods of remote acquisition of data, including satellite sensors, airborne radar, multiband scanning, conventional photographic sensors, and ground-based equipment.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**596**	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**601**	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals. Module 1 of the fall semester for MAS-GIS professional degree program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**602**	Intermediate GIS	Intermediate GIS for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	**603**	Spatial Statistics and Modeling	Spatial statistics and modeling for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**604**	Implementation in the Corporate and Public Sectors	Uses GIS in the corporate and public sectors. GIS ethics. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**605**	GIS Project: Real-World GIS Project Planning and Implementation for Public Sector Agencies	GIS project development for the public sector. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**606**	Gis Project Presentation	Mastering technical project presentation for GIS professionals. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**610**	Programming the GIS Environment	Programming the GIS environment for the MAS-GIS program. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**620**	Remote Sensing	Remote sensing for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**630**	Air Photo Interpretation for MAS-GIS	Air photo interpretation for the MAS-GIS program. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**640**	GIS for Business	Uses GIS in business for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**650**	GIS for the Internet	GIS for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GPH	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GRA	**101**	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**111**	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
GRA	**112**	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 111 with C or better
GRA	**121**	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 111
GRA	**122**	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 121 with a C or better; Co-requisite: GRA 112
GRA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**220**	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	**221**	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	**222**	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	**223**	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	**224**	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	**225**	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**321**	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 361

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	**322**	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	**345**	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Graphic Design, Architecture, Interior Design, Industrial Design, Housing Community Development or Design Studies BA; ENG 102, 105 or 108 with C or better
GRA	**361**	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	**362**	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**401**	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**421**	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	**422**	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	**423**	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422
GRA	**424**	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422 with C or better
GRA	**440**	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**461**	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	**462**	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
GRA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
GRA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

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GRA	**501**	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Science in Design or Ph.D. Design student
GRA	**526**	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**561**	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**562**	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the syntheis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: DSC 561 with C or better
GRA	**563**	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**581**	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
GRA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Graduate College	1.		
GRD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
GRD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRK	**101**	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GRK	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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GRK	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**201**	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: GRK 101 with C or better
GRK	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**301**	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 201 with C or better
GRK	**302**	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 301 with C or better
GRK	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
GRK	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GRK	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	**501**	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**503**	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**505**	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**506**	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		
GTD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
GTD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
HCR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**210**	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisite: ENG 102,105 or 108
HCR	**220**	Introduction to Nursing and Healthcare Systems	Introduces the social, political, and economic contexts in which the nursing profession and healthcare systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCR	**230**	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	C & G	
HCR	**240**	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate Nursing students; BIO 201, BIO 202, CHM 101 or higher, MIC 205 and MIC 206 with C or better
HCR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**550**	Principles of Epidemiology for Healthcare	Introductory graduate-level course intended to provide students with fundamental epidemiology concepts and methods which can be applied to their field of interest.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**561**	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**562**	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**563**	Clinical Research Management and Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**564**	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	**565**	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**566**	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**567**	Applied Cost-Effectiveness Analysis in Intervention Research	Principles and methods of cost-effectiveness analysis and the application to interpreting clinical trial and sociobehavioral intervention results	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or any graduate nursing program; HCR 561 and HCR 565 with D or better
HCR	**568**	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or certificate program
HCR	**569**	Applied Principles of Data Management & Inferential Statistics in Healthcare Research	Applied principles of data management and inferential statistics in epidemiological, psychosocial, medical, nursing, and healthcare research. Seminar. Prerequisites: DNP 679; HCR 572; NUR 609; admission to Clinical Research Management Certificate(NUCRGRCC) or master's program (NUCRMMS), any graduate nursing program.	N	SEM	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Certificate or Master's program or any graduate Nursing program; NUR 609, DNP 679 and HCR 572 with D or better
HCR	**570**	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**571**	Cultural Diversity in Clinical Practice	Introduces culturally diverse aspects of clinical care, including culture bound syndromes folk practices, appropriate assessment approaches, and client/provider interaction.	N	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**572**	International Health Capstone Project	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
HCR	**573**	Principles of Health Science Research	Orientation to translational health sciences research methods, creating transdisciplinary research terms, and implementing transdisciplinary translational research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student
HCR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HCR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HDA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HDA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7		
HDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
HEB	**102**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: HEB 101 with C or better
HEB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**201**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 102 with C or better
HEB	**202**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 201 with C or better
HEB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**313**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 202 with a grade of C or greater or be currently enrolled
HEB	**314**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 313 with a grade of C or greater or be currently enrolled
HEB	**375**	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
HEB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HEB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
HEB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
HEB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
HED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
HED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**510**	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-4		
HED	**527**	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**602**	Institutional Research/Strategic Planning	Provides an overview of policy research and planning in higher education at the campus system and governing/coordinating agency levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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HED	**611**	Curriculum and Instruction	Curriculum development, instructional organization, and improvement of instruction in higher education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**620**	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**634**	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**644**	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**649**	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
HED	**679**	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**687**	Governance, Coordination, and External Influences in Higher Education	Study of governance and coordination in higher education systems and the impact of external forces on them.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**688**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**689**	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**701**	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student

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HED	**702**	Critical Policy Issues In Higher Education	How great expectations in Washington are dashed in Oakland, Pressman and Wildavsky (1984) state that "policies imply theories--Whether stated explicitly or not, policies point to a chain of causation between initial conditions and future consequences." Policy can be broadly defined as a principal, plan, or course of action undertaken by governments, organizations, or individuals and designed to influence and determine decisions and actions. Many assumptions made by policy makers and other constituencies as well as competing social and political considerations shape the development of policy in higher education. Given the importance of federal and state public policy-making to higher education, we examine the effect of public policy on the functioning of colleges and universities and explore the various facets of public policy issues. Examines critical policy issues for higher education and the assumptions underlying their development.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**703**	Institutional Research and Evaluation in Higher Education	Higher education professionals (e.g., administrators, faculty, and researchers) are expected to develop an understanding of and appreciation for the role of research, analysis, and evaluation. Institutional research and evaluation are important functions in the advancement of colleges and universities. These functions help to maintain efficacy within educational organizations by providing vital data and analysis used in planning, decision-making, and policy development. Designed to develop a deep understanding of the contextual and practical applications of research and evaluation within higher education institutions. Students develop skills and execute techniques that are critical to conducting institutional research and evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**704**	Qualitative Case Study Approaches For Policy Research In Higher Education	Provides advanced graduate students with instruction in qualitative case study research approaches as applied to questions of higher education policy. Emphasizes individual and group interviewing as techniques for qualitative case study data collection, coding, and analysis. Particularly useful for advanced doctoral students who plan to conduct a qualitative dissertation related to a higher education policy topic.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**705**	Ethics, Diversity, and Educational Leadership in Higher and Postsecondary Education	Students read and discuss recent writings on ethical decision making as related to the context of higher and postsecondary education. According to Shapiro & Gross (2008), "educational leaders have always had to make important decisions that affect the studies and lives of the next generation." St. John (2009) underscores the importance to ethical practice of understanding critical higher education issues in organizational practice, the gaps between moral beliefs and actions, and improving equity in organizations. Doctoral students review theoretical concepts related to ethical decision making and apply them to moral dilemmas in higher and postsecondary education leadership, policy-making, and organizational change.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**707**	Higher Education Institutional Types and Innovative Initiatives	Students gain an in-depth understanding of the various types of higher and postsecondary education institutions in the United States, including two-year and four-year colleges and universities, historically Black colleges and universities (HBCU's), Hispanic-serving institutions (HSI's), tribal colleges, women's colleges, faith-based colleges, and for-profit colleges. Covers current classification system used to group each institutional type. Examines the contribution of each institutional type to the development of American higher education, their current status, and potential futures. Studies exemplary programs, within various institutional contexts, that seek to address the academic needs of diverse student communities. Guest speakers and an out-of-state institutional site visit provide opportunities for students to interact with and learn from faculty and administrators within institutional contexts.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HES	**301**	Adult Fitness I	Physical fitness and benefits of exercise. Emphasizes fitness assessment and designing an individualized assessment program. Y/E grade only. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Credit is allowed for only HES 301, EPE 301,325, 494, HES 301or HES 494
HES	**302**	Adult Fitness II	Continuation of HES 301. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 completed with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 302
HES	**303**	Adult Fitness III	Continuation of HES 302. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 with Y grade; HES 302 with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 303
HES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
HHE	**510**	Theory of Healthcare Design	Theoretical problem solving and practical application strategies used in the design of healthcare and healing environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**524**	Contemporary Issues in Healthcare Design	Address contemporaneous healthcare design issues and challenges and propose theoretical solutions through evidence-based research. Seminar.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: HHE 510 and HHE 540 with B or better
HHE	**540**	Healthcare Design Typologies: Case Studies	Industry best practices and benchmarks for various types of hospital facilities and healthcare systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**566**	Healing Experience Studio	Connects spatial relationships and patient needs through design. Investigates user experience of space on a personal level. Studio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**591**	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**494**	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Honors students only; Total earned hours must be equal to or less than 60
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**274**	The Human Event: Social Science Focus	Continuation of HON 171 from the Renaissance through the modern period; emphasizes the development of the social sciences.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or SB) & H	Pre-requisite: HON 171 with C or better
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**298**	Honors Directed Study		N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**310**	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**317**	Philosophers, Poets, and Revolutionaries in Latin America	A transdisciplinary honors course that introduces students to major intellectual currents in three regions of Latin America.	N	DIS	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**366**	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	FLD	Y	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**371**	Freedom and Authority	Historical overview of concepts of liberty, responsibility, and power in Western societies, emphasizing 18th- to 20th-century developments.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**372**	French Cultural Influences	Explores textual and cultural artifacts formative of French culture as a series of contacts and conflicts with other peoples and lifeways.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & G	
HON	**373**	Heroes, Heroines, and Villains	Examines concepts of heroic and villainous characteristics as expressed in the literature and visual arts of various cultures throughout history.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**374**	Black and White Atlantic	Examines development (18th- to 20th-century) and cultural manifestations of Black/White race relations within the U.S. and between the U.S. and other nations.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**375**	Science and the Modern Self	Concentrates on texts of the 19th and 20th centuries; explores how scientific discourse determines our notions of self.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**376**	Law, Literature, and Life	Multidisciplinary approach to the subject of law, examining it through literature, history, and legal philosophy.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	Pre-requisites: Honors students only
HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**378**	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & H & G	
HON	**379**	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**410**	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-12		Pre-requisite: Barrett Honors student
HON	**485**	Biosphere 2; Study Opportunity	For students participating in the ASU-sponsored program at Biosphere 2.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-18		
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisite: Honors students only
HON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-7		Pre-requisites: Honors students only
HON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-15		
HPS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**311**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU or SB	
HPS	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	**322**	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	

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HPS	**323**	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**325**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H & G	
HPS	**330**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**331**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
HPS	**332**	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**336**	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SB & H	
HPS	**340**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with C or better: BIO 187 (or both PLB 200 and PLB 201) and BIO 188. Students with credit for BIO 311, may not enroll in HPS 340
HPS	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**402**	Technology, Society, and Human Values	Values that motivate humankind to create technology. Areas of conflict and resolution of conflict between values and technology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**410**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
HPS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
HPS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
HPS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
HPS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**512**	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**513**	Decisions and Strategies	Explores topics in decision theory, game theory, social choice theory, epistemology, and related fields. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**550**	Methods in History and Philosophy of Science	Introduces current methods in the practice of history and philosophy of science. Organized around major historiographical schools in the history of science such as social, institutional, intellectual, cultural, or feminist history of science and current concerns in philosophy of science such as causation, explanation, modeling, and epistemology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**610**	History and Philosophy of Science Lab	This course brings together graduate students, postdocs, and faculty members in HPS. Sessions include panel discussions of HPS topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
HPS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
HSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**210**	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**300**	Complementary Healthcare	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: HSC 210 with D or better
HSC	**320**	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Sophomore, Junior or minimum 30 hours; PHI 101
HSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**420**	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: STP 226, PSY 230, PSY 231, POS 401, SOC 390, STP 231 or STP 420

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		
HSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSD	**501**	Theories of Science and Democracy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**502**	Analysis of Knowledge and Expertise in Policy Decisions	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**503**	Analysis of Scientific and Technological Innovation	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**504**	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
HSD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		
HSD	**601**	Core Seminar I	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**602**	Core Seminar II	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**610**	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions. May be repeated for credit for a total of 6 hours.	N	SEM	Y	OPT	Graduate College	Graduate College	1.		
HSD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Graduate College	Graduate College	1-12		
HSD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		
HSD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-15		
HSM	**220**	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	H	
HSM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**493**	Honors Thesis		N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
HSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**502**	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**505**	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 561 or ECN 501 with C or better.
HSM	**512**	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better

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HSM	**522**	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**542**	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**561**	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**564**	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**565**	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**566**	Managerial Epidemiology II	Basic principles of epidemiology, evaluation of etiology, natural history, intervention therapy, and disease prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**575**	Health Policy Management and Evaluation	Provides students with the analytical techniques and real world experience to manage the implementation and evaluation of changes in health policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**578**	Managing Clinical Trials	Introduces students to theoretical and practical aspects of randomized controlled clinical trial methodology.	N	LEC	N	GRD	W.P. Carey School of Business	Department of Economics	3.		Pre-requisite: HSM 505
HSM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**589**	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**105**	Slavic Civilization	Development of Slavic cultures and societies from medieval Byzantium to the present; introduces modern Eurasia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**106**	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	

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HST	**108**	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**200**	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**201**	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**202**	Historical Themes in Europe	General introduction to selected themes in European history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**211**	American Jewish History	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Pre-requisites: Students who have credit for SSH 301, or ASB 301 may not enroll in HST 301
HST	**302**	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**303**	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**304**	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**305**	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**306**	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**307**	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**310**	Film as History	Surveys moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
HST	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**316**	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**321**	Constitutional Hist/US to 1965	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**323**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**329**	Women in 20th-Century US West	Examines how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H & C	
HST	**330**	Mexican Women in the U.S.	Overview of Chicana history from Mesoamerican origins to the present, focusing on Mexican women in the western U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**333**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**347**	Ancient Greece	History and civilization of the Greek world from 650 BCE to the death of Alexander the Great.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**348**	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**349**	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**350**	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**351**	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**353**	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**354**	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**356**	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**357**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
HST	**358**	Jewish History from the Bible to 1492	Continuity and change in political, legal, economic, and sociocultural history of the Jews from biblical through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**359**	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**366**	England to 1689	Political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**367**	Modern Britain	Political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**370**	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**371**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**372**	Modern Middle East	Impact of the West and modernization upon Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**376**	Modern Latin America	Nationalistic development of the independent republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**377**	Women in Colonial Latin America	History of women in colonial Latin America, cross-examining class, race, and gender relations in depth.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**378**	Latin American Women: The National Period	Surveys the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**379**	Rebellion & Revolution/So Amer	Political, economic, and social development of Spanish-speaking nations in South America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**380**	Cultural History of Latin America	Main currents of thought, the outstanding thinkers, and their impact on 19th- and 20th-century Latin America. Cultural and institutional basis of Latin American life.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**381**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
HST	**383**	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**384**	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**385**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**386**	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**387**	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**388**	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**389**	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

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HST	**391**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**405**	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**407**	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**409**	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**410**	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**411**	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**412**	Contemporary U.S., 1973- Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**414**	The Modern U.S. Economy	Origins of 19th-century slavery and industrialization; 20th-century crisis and regulation: political economy of an advanced capitalist democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**417**	Topics in Mexican American History	Focuses on specific topics in Mexican American history including immigration, civil rights, the Chicano Movement, union activism, and regional and generational differences.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**423**	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**424**	Stuart Transform of England	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**426**	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**427**	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**428**	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**429**	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**431**	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**432**	East Euro/ the Balkans-20 Cent	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**435**	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**436**	The Soviet Experiment	Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former USSR.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**438**	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**443**	The United States & Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**445**	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**446**	Colonial Mexico	Political, economic, social, and cultural developments from pre-Columbian times to 1810.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**451**	Chinese Cultural History	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**452**	Chinese Cultural History	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**453**	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**455**	The United States and Japan	Cultural, political, and economic relations in the 19th and 20th centuries. Emphasizes post-World War II period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
HST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**496**	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper. Course themes may vary by instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: For South Asia track: REL 294, or SGS 294 (topic:Intro to South Asia) with C or better; for SE Asia track: HST 240,REL240, ASB 240, GCU 240, POS 240, or SGS 240 with C or better
HST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**502**	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**512**	West Civil to the Enlightenmnt	Systematically examines various interpretations of Western civilization from the ancient Middle Eastern civilizations to the European Enlightenment.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**514**	Historians of the U.S.	Study of the history of American historical writing from the early colonial days to the 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**515**	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**525**	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**526**	Historians and Preservation	Preparation of historians for public and private historic preservation programs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**527**	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**532**	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**551**	Comparative Histories--War and Revolution	Comparative field course of the themes of war and revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**554**	Population-Ethnicity/Econ/Migr	Comparative course that explores the impact of social, cultural, or economic changes in the population.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**555**	Comparative Historical Topics	Analyzes a variety of specific social, political, cultural, and intellectual topics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisite: History MA or PHD student
HST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**340**	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	

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HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**400**	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**401**	Topics in Comparative History	Comparative history with reference to one or more themes.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**402**	Topics in European Regional and National History	Focuses on the history of specific geographic regions or nations in Europe.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**413**	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H & C	
HST	**418**	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
HST	**419**	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**454**	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G & H	
HST	**464**	Women in Europe to 1750	European women's diverse religious, ethnic, national and economic roles in society, culture, and politics in the pre-modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	Pre-requisites: ENG 102 or 105 with C or better; HIS 101 or 300 with C or better
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours

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HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-15		
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**318**	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**345**	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**416**	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**444**	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**448**	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better
HST	**449**	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identify, and civil rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**450**	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed either SED 403 or SED 598 with C or better. Credit for HST 481 or HST 535 only
HST	**492**	Honors Directed Study		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**530**	Methods of Teaching Secondary History	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 480 or HST 530
HST	**535**	Teaching Secondary Social Studies	Emphasizes secondary educational methods of planning, teaching, and assessing appropriate content in the instruction of social studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 481 or HST 535
HTY	**220**	Introduction to Digital Archives	Familiarizes students with the uses and challenges of digital archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**230**	Introduction to Corporate Archives	Covers principles and techniques for creating and managing corporate archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**246**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Credit is allowed for only ENH 246 or HTY 246
HTY	**310**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
HTY	**312**	History of Science	Examines the beginnings of modern science and traces its development and impact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better

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HTY	**314**	History of Computing	Examines the history of computing, including the development of computing devices, and the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**320**	History of American Agriculture	Overview of the history of agriculture in America from pre-contact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**325**	History of American Business	The history of American business, including its evolution, structure, and values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108, or ENG 112 with a grade of C or better
HTY	**326**	History of Landscape Design	Examines the history of design traditions and landscaping from the ancient world to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with a grade of C or better
HTY	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102,ENG 105, ENG 108, or ENG 112, with a C or better
HTY	**330**	History of Printing and Media	Examines the history of printing, books, and the development of modern forms of media.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**334**	Archival Preservation and Digital Media	Covers the preservation of digital archival data.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:HTY 220, or HTY 230 with a grade of C or better
HTY	**336**	Editing Historical Documents	Covers the principles and techniques for editing historical document collections.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requsites:ENG 102, 105, 108, or ENG 112, with a grade of C or better, and HST 300 or HTY 301 with a C or better
HTY	**346**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENH 246 or HTY 246 with a C or better or currently enrolled
HTY	**360**	Women and Science	Examines the role of women in the sciences, focusing on their achievements, challenges, barriers, and persistence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**370**	History of Collecting	Historic overview of the practice of collecting art, artifacts, specimens, memorabilia. Includes classification and display systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**410**	Historic Preservation	Major topics of historic preservation, such as legislation, education. Includes principles of preservation and interpretation of artifacts and structures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better; AND HST 300 with a C or better
HTY	**450**	History of Ecology and Conservation	Examines the historical development of ecology and conservation movements in the United States and the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: HTY 301 with C or better or currently enrolled; Senior academic level
HUD	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpment student
HUD	**201**	Introduction to Housing and Urban Development	Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and non-profit practitioners.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**301**	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**302**	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**361**	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	**362**	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	**363**	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 301; HUD 361
HUD	**364**	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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HUD	**401**	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**402**	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**403**	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**461**	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	**462**	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	**463**	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	**464**	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 402; HUD 462
HUD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Housing & Urban Develpmnt BSD student
HUD	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
HUD	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
HUD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
HUM	**502**	Writing Cultures	Theories and methods of representing Western and non-Western cultures in literature, history, ethnography, and pictorial media.	N	LEC	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**503**	Research and Writing in the Humanities	Systematic training in humanistic research and writing with particular attention to the interdisciplinary study of culture.	N	SEM	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**513**	Interpretation ofCultures	Methodologies and comparative theories for the study of relationships among various aspects of culture, the history of ideas, and the arts. May be repeated for a total of 6 semester hours when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Must be a Graduate student.
HUM	**530**	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		

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HUM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Division of Humanities T	1.		
HUM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**413**	Comedy: Meaning and Form		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IA	**102**	Wood Turning		Y	LEC	Y	CNV	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
IAP	**101**	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**102**	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	STO	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**103**	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**104**	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**105**	Foundations I: Fundamentals of Interdisciplinary Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary arts application.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	
IAP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**201**	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**202**	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**301**	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**302**	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**303**	Artists and the Contemporary American Experience	Explores the life of the contemporary American artist with respect to individuality, pluralism, gender, race, ethnicity, and regionalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**304**	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**305**	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**306**	Extended Traditions in Drawing	Explores alternative methods of rendering the drawn image. Emphasizes incorporating other art forms to inform students' individual work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**307**	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAP	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**321**	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**322**	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**323**	Music and the Visual Arts	Histories and theories of music and visual arts with emphasis on convergences within 20th-century avant-garde traditions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**324**	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	**325**	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Plan ASIAPBA
IAP	**331**	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**332**	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**333**	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**334**	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**335**	Vocalization and Movement	Study, application, and coordination of vocal projection techniques with bodily movement competencies in presenting original and existing contemporary performance works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**347**	Movement in Education	Theory and practice of teaching dance and creative movement in schools, K-12. Open to all students.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**351**	Concept, Image, and Text	The generation of images and metaphors using various media and visual stimuli.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**352**	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**354**	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**355**	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**356**	Spatial Impressions	Investigates 3-D forms, the processes and concepts of physicality, and the environment with readings on spatial perception and cultural objects.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**360**	IAP Laboratory	Provides instructor-student contact time focusing on the technical instruction of media and technology applications.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
IAP	**361**	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	Pre-requisites: must be in PLAN ASIAPBA, or ASACOBS
IAP	**363**	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**364**	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**365**	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in Plan:ASIAPBA OR Plan: ASACOBS
IAP	**368**	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**371**	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**373**	The Critical Artist	Focuses on artists' critical thought, theorizing, and representation of art across disciplines and genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**421**	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work. Fee.	N	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**422**	Contemporary Orchestration Practices	Traditional and experimental scoring techniques for small and large ensembles using MIDI technology, digital samplers, and traditional instruments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**431**	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**433**	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**434**	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**441**	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	**442**	Movement and Music	Surveys ways artists have brought together movement and music in artistic creations in various disciplinary and interdisciplinary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**452**	Elements of Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**454**	New Directions in Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**457**	Urban Narrative	Conceptually based studio focusing on artists' voices in contemporary urban environment with readings on spatial perception and cultural objects. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**464**	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**465**	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**466**	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN:ASACOBS
IAP	**467**	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**468**	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN: ASACOBS
IAP	**469**	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**471**	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**472**	Theories of Arts and Performance	Key texts, thinkers, concepts, and approaches to the arts and performance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**473**	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**474**	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**480**	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-6		
IAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
IAP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**220**	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		

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IAS	**300**	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	**305**	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
IAS	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater, or be currently enrolled, or co-enrolled with IAS310.
IAS	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAS	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 406 or PHI 406
IAS	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**410**	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	**415**	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**416**	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**430**	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	**477**	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisite: ENG 101 or 105 with C or better
IAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
IAS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IBC	**602**	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**604**	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**608**	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**609**	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiolgical processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**660**	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	**704**	Evidence-based Behavioral Interventions I: Core Skills	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**706**	Evidence-Based Behavioral Interventions II: Advanced Skills	Cover advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Focuses on both advanced behavioral interventions theory and practice and more complex diagnostic groups and related interventions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**712**	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**714**	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**718**	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

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IBC	**720**	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**728**	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IBS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IDN	**101**	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
IDN	**102**	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: IDN 101 with C or better
IDN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	**201**	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 102 with C or better
IDN	**202**	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 201 with C or better
IDN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
IED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**401**	Navajo Language and Culture I	History and culture are added components to the introduction of language reading, writing, and speaking. Emphasizes basic communication and appreciation of history and culture.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**403**	Navajo Language and Culture II	Emphasizes communication, grammar, and sentence structures. Translations, reading, writing, and discussions of proper and slang language. Includes cultural activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**410**	History American Indian Educ	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 410 or 510.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB & H & C	Pre-requisites: Students who have credit for IED 510, may not enroll in IED 410

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IED	**430**	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 430 or 530.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C	
IED	**433**	Counseling the Indian Student	Techniques and methods used in counseling, with emphasis on understanding Indian cultures and values. Experimentation with new counseling concepts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**444**	Govt Role-Native Ed Pol/Adm	Examines the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty as they have shaped American Indian education. Analyzes administrative practices and personnel, program and fiscal management, and resources as they reflect the historic and present influence of this triad of factors. Credit is allowed for only IED 444 or 544.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
IED	**460**	Yaqui History and Culture	Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family, traditions, community, resistance, dispersion, and survival.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C & H	
IED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
IED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
IED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**510**	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 510 or 410.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student. Students who have credit for IED 410, may not enroll in IED 510
IED	**530**	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 530 or 430.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**544**	Govt Role-Native Ed Pol/Adm	Examines American Indian education and how it is impacted by the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty. Credit is allowed for IED 544 or 444.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	**100**	Introduction to Engineering Design	Introduces industrial engineering design; teaming, the profession of engineering, computer models in engineering communication skills; quality and customer satisfaction. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	2.		Pre-requisites: Freshman or Sophomore standing
IEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**210**	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: IEE 100(or BME100,CHE100,CEE100,CSE101, ECE100,EEE101,EGR101,FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	**220**	Business/Industrial Engr	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering student; Introduction to Engineering course with C or better (or ECE 100); Minimum Sophomore standing
IEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**300**	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Prerequisites: FSE BS/BSE OR Non Engnr with a min GPA of 3.00; MAT 265, 270 or 290 with a D or greater or currently enrolled; BME 100, CEE 100, CHE 100, CSE 101, ECE 100, EEE 101, IEE 100, MAE 100 or MSE 100 with a D or greater or be currently enrolled
IEE	**305**	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: CSE 200 or 205 completed with a D or better or currently enrolled; Must either be an Engineering BS/BSE student or must be a Non-Engineering students with a minimum GPA of 3.00

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IEE	**368**	Facilities Analysis and Design	Planning, analysis, and design of the tangible physical assets of the firm. Emphasizes facilities location, materials handling, automation, computer integration, and utilization of financial resources. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: IEE 300 completed with a grade of D or better or currently enrolled; Must be either an Engineering BS/BSE student or a Non-Engineering student with a minimum GPA of 3.00.
IEE	**369**	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE students only and a grade of D or better or currently enrolled in IEE 300.
IEE	**376**	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: CSE 200 or CSE 205; MAT 242, 342, or 343
IEE	**380**	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Engineering student; MAT 266 or 271 with C or better
IEE	**382**	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Industrial Engineering BSE student; Co-requisite: IEE 380
IEE	**385**	Engr Statistics - Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE/MS/MSE/PHD student; IEE 380 with C or better or ECE 380 with D or better
IEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**405**	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering BS or BSE student
IEE	**431**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 431 or 541.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be a senior Engineering BS/BSE student.
IEE	**437**	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines. Credit is allowed for only IEE 437 or 547.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE students OR Non Engineering students with a minimum GPA of 3.0
IEE	**461**	Production Control	Techniques for the planning, control, and evaluation of production systems. Project management, forecasting, inventory control, scheduling, enterprise requirements planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering BS/BSE student AND have completed with a D or better IEE 376 or IEE 476 AND have completed ASE485, IEE 385 or IEE 485 with a grade of D or better AND have completed CSE 100 or CSE 110 with a grade of D or better.
IEE	**463**	Computer-Aided Manufacturing and Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning, and robotics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Must be an Engineering BS/BSE student with Junior or Senior standing
IEE	**470**	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Industrial Engineering BSE student; IEE 376 with C or better; IEE 380 with C or better
IEE	**474**	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: IEE 380 with C or better
IEE	**475**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	4.	CS	
IEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**490**	Project in Design and Development	Individual or team capstone project in creative design and synthesis. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE Senior; IEE 475; IEE 376 or IEE 476 with C or better
IEE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Pre-requisites: Must be an Honors student.
IEE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Pre-requisites: Must be an Honors student
IEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**505**	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**511**	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**512**	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**520**	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**530**	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**532**	Management of Technology	Topics include designing a technical strategy; technological forecasting; interfacing marketing engineering and manufacturing; designing and managing innovation systems; creativity; application of basic management principles to technology management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**533**	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**534**	Supply Chain Modeling/Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**535**	Intro Intnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**541**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 541 or 431.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student.
IEE	**543**	Cmptr-Aided Manufact/Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning and robotics. Credit is allowed for only IEE 543 or 463.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**545**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Credit is allowed for only IEE 545 or 475.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be Engineering graduate student.
IEE	**547**	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors. Credit is allowed for only IEE 547 or 437.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**552**	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better or co-enrolled in IEE 545, IEE 561, or IEE 574.
IEE	**553**	Information Systems Assurances	Develops and applies engineering approaches to assuring the security of enterprise information systems, including principles of dependable information systems, technologies for information systems, intrusion detection, system response, and recovery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate Engineering student; IEE 505 with a C or better
IEE	**560**	Object-Oriented Info Systems	Applies object-oriented technology and concepts to enterprise information systems. Topics include requirement analysis, object-oriented design and programming, rapid application development, object data management, and development of object-oriented distributed applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have a grade of C or better in IEE 505 or be currently enrolled.
IEE	**561**	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**562**	Computer-Aided Mfg-CAM Tools	Current topics in automation, distributed control, control code generation, control logic validation, CAM integration, CAD/CAM data structures, planning for control systems. Topics vary by semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have completed IEE 463 or IEE 543 with a grade of C or better or be currently enrolled.

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IEE	**563**	Distributed Info Systems	Introduces concepts and technologies that form the core of distributed enterprise information systems. Topics include client-server architectures, distributed objects and paradigms, Internet, World Wide Web, distributed information sharing, network programming, and e-commerce and enterprise applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS/MSE/PHD student; IEE 505 with C or better
IEE	**564**	Planning -Cmptr-Integrated Mfg	Theory and use of IDEF methodology in planning for flexible manufacturing, robotics, and real-time control. Simulation concepts applied to computer-integrated manufacturing planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**565**	Cmptr-Integrated Mfg Research	Determination and evaluation of research areas in computer-integrated manufacturing, including real-time software, manufacturing information systems, flexible and integrated manufacturing systems, robotics, and computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better in IEE 564.
IEE	**566**	Simulation in Manufacturing	Uses simulation in computer-integrated manufacturing with an emphasis on modeling material handling systems. Programming, declarative, and intelligence-based simulation environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**567**	Simulation System Analysis	Simulation modeling of processes involving discrete and continuous system components. Topics include random number generators, output analysis, variance reduction, and statistical issues related to simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**570**	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**571**	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**572**	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**573**	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**574**	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	**575**	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**576**	Analy Semiconductor Mfg Oper	Applies operations research and statistical methods to solve problems that involve semiconductor manufacturing operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**577**	Adv Information System Oper	Industrial engineering knowledge and skills for information system operations, includidng aspects (security,quality of service, user interface, information modeling), problems, and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 505 with C or better
IEE	**578-M**	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**579**	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**581**	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in design of experiements, statistical quality control, and regression analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**582**	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		

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IEE	**585**	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**620**	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**670**	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**672**	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	**677**	Regression/Genrlzd Linear Mod	Theory of linear models including least squares, maximum likelihood, likelihood-based inference. Generalized linear models including Poisson and logistic regression, generalized estimating equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 578 with C or better
IEE	**679**	Time Series Analy/Control	Identification, estimation, diagnostic checking techniques for ARIMA models, transfer functions, multiple time series models for feedback and feedforward control schemes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 579 with C or better
IEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		

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IEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IMD	**564**	Multimedia Applications in Instruction	Utilizes various forms of multimedia and authoring software to create materials and instruction. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**566**	Assessment and Evaluation of Media Applications	Examines a variety of strategies in assessing learning, collecting and evaluating data, and evaluating technology resources for classroom integration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**572**	Media Collection and Development	Explores the identification, selection, acquisition, and evaluation of a collection of library resources for a specific community of users.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**574**	Organization and Administration of School Library Media	Explores the role of the school library media specialist and program as it relates to the educational community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**576**	Social and Ethical Issues in Educational Media	Examines the social, ethical, legal, and human issues surrounding the use of technology in K-12 schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
IMD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
IMD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
IND	**120**	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student
IND	**121**	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 122
IND	**122**	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; IND 120 with C or better; Co-requisite: IND 121

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IND	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**227**	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	**228**	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	**236**	Intro Cmptr Model-Indust Dsgn	Computers in industrial design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; Passed Milestone
IND	**242**	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**243**	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**260**	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	**261**	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	**316**	20th-Century Design I	Modern European and American design from 1900 to 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**317**	20th-Century Design II	Modern European, Asian, and American design since 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**327**	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	**328**	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	**344**	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**354**	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Pre-Industrial Design or Industrial Design BSD student; PHY 111 with C or better
IND	**360**	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	**361**	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**460**	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	**461**	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**470**	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
IND	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
IND	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**544**	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
IND	**548**	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
IND	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**111**	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
INT	**120**	Design Drawing and Media	Visual thinking: Development of freehand drawing techniques as a language and tool to explore, communicate, and process ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student
INT	**121**	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Credit is allowed for only INT 121 or 320
INT	**123**	Introduction to Computer-Aided Design of Built Environments	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**131**	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	SB	
INT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**221**	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 120 with C or better; Co-requisite: INT 222
INT	**222**	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Interior Design student; Co-requisite: INT 221
INT	**223**	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	**238**	Intro to CAD	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment. Lecture, lab.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**253**	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 261 with a C or better; Co-requisite: INT 351
INT	**261**	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**310**	History of Interior Design I	Design of interior spaces as an expression of cultural influences to 1835.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: ARS 102 with C or better
INT	**311**	History of Interior Design II	Design of interiors as an expression of cultural influences from 1835 to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Must have completed INT 310 with a grade of C or greater or be currently enrolled
INT	**320**	Computer Modeling for Design Studies	Computers in design management, including sofware concepts, specific packages, problem solving, illustration, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Credit is allowed for only INT 121 or 320
INT	**341**	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Corequisites: INT 352, INT 362, and INT 381
INT	**351**	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisite: INT 253
INT	**352**	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 362 and INT 381
INT	**354**	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	**362**	Interior Design Studio II: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 352 and INT 381
INT	**363**	Interior Design Studio III	Explores the poetics of materials and their assemblage in the design of public and private spaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	**364**	Interior Design Studio I	Studio problems in interior design related to behavioral response in personal and small group spaces. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		
INT	**381**	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Urban Planning , Landscape Architecture BSLA, Graphic Design BSD, Interior Architecture BSD, Architectural Studies BSD, Housing & Urban Develpmnt BSD or Industrial Design BSD

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**412**	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	Pre-requisite: INT 311 with C or better
INT	**413**	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	FLD	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: INT 412 with C or better
INT	**415**	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Minimum Junior standing
INT	**446**	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	**464**	Interior Design Studio IV: Work Environments	Studio problems in interior design-related issues in work environments. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	**465**	Interior Design Studio V: Institutional Design	Advanced interior design problem solving related to institutional facilities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	**471**	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**472**	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
INT	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
INT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**512**	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**513**	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**527**	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**529**	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

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INT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
INT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**111**	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**311**	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**312**	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**315**	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 311, 312 with a grade of D or better, or enrolled, or ITA 314 with D or better or enrolled
ITA	**319**	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ITA 202 with C or better
ITA	**321**	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**322**	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: ITA 202 with C or better
ITA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**413**	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	**420**	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**425**	Italian American Culture	Analyzes representations of Italian American history and culture in several media including literature, film, and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	

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ITA	**430**	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarch, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**441**	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**443**	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**446**	Italian Literature of the 18th and 19th Centuries	Goldoni, Parini, Alfieri, the poetry of Foscolo and Leopardi, and the sociohistorical novels of Foscolo, Manzoni, and Verga.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**449**	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
ITA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ITA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**594**	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JHR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	**501**	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**506**	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
JHR	**510**	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**511**	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**525**	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		

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JHR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		
JHR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JMC	**101**	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism courses. A test is offered during the first week of each semester's class so that students who feel they already have a mastery of grammar may attempt to test out.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication student
JMC	**110**	Principles and History of Journalism	Organization, function, and responsibilities of the media and adjunct services. Primary emphasis on newspapers, radio, television, and magazines. Credit is allowed for only JMC 110 or MCO 120.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student
JMC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Journalism and Broadcasting student
JMC	**201**	News Reporting and Writing	Basic news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: ENG 102, 105 or 107 and JMC 110 (or MCO 120) with C or better; JMC major; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
JMC	**301**	Intermediate Reporting and Writing (Print)	Intermediate news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**305**	Online Media	Focuses on the Internet from the perspective of the journalist--the best way to tell a story using words, photos, video, and audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 with C or better; 2.5 cumulative GPA OR Graduate Mass Communication student
JMC	**310**	Public Relations	Theory and practice of publicity, public relations, and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**313**	Introduction to Editing	Copyediting and headline writing. Electronic editing on personal computer terminals. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better
JMC	**315**	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**320**	Newscast Producing	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video. Students learn how to design, write, and supervise the television newscast. In practical lab experience, students produce a live 30-minute television newscast airing in greater Phoenix. As must be current on news of the day both locally and nationally, and be prepared to supervise other students in the news-gathering process.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites:Journalism major with a 2.50 GPA or higher; Pre-or co-requisites: JMC 315 and JMC 305 (JMC 425) with C or better if completed
JMC	**325**	Multimedia Reporting	Gives students practical experience working in an online, multimedia environment. Helps sharpen skills and gives them a real-world view of how journalism works in the 21st century.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**330**	Television Reporting	Writing, reporting and editing for television. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	**332**	Electronic Media Programming	Programming theory and evaluation, regulation, ethics, and responsibilities and basics of audience psychographics and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 200 (or MCO 200) with C or better; Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	**336**	Station Operations	Basic understanding of the operations of a broadcast station. Examines internal organization structure and the relationship between each department.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 200 or MCO 200 with C or better
JMC	**345**	Videography	Develops an understanding of visual storytelling and how to craft a good, compelling story with pictures and sound. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA; JMC 201 with C or better
JMC	**351**	Photojournalism I	Basic camera, lighting, and scanning skills. Discusses ethics. Emphasizes shooting pictures for newspaper assignments on deadline. Students should have a 35mm (film) camera. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC students; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101); Minimum 2.50 GPA
JMC	**366**	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre- requisites: JMC student; JMC 110 with C or better; Minimum 2.50 GPA; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	**402**	Mass Communication Law	Legal aspects of the rights, privileges, and obligations of the press, radio, and television.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 and ENG 102 with C or better; Minimum 56 hours; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**412**	Editorial Interpretation	The press as an influence on public opinion. Role of the editorial in analyzing and interpreting current events.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Prerequisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**413**	Advanced Editing	Theory and practice of newspaper editing, layout and design, picture and story selection. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**414**	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Comm student; JMC 201 with a C or better or be currently enrolled; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); 2.50 cumulative GPA
JMC	**415**	Writing for Public Relations	Development of specific writing techniques for the practitioner in public relations agencies and divisions of major organizations. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**417**	Public Relations Campaigns	Theory, principles, and literature of public relations and how they relate to audiences, campaigns, and ethics.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**420**	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	**433**	Media Sales and Promotion	Basics of electronic media marketing practices, including commercial time sales techniques and radio/TV promotion fundamentals.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Comm student, JMC 200 (or MCO 200) with a grade of C or greater or be currently enrolled; 2.5 cumulative GPA OR Graduate Mass Communication students
JMC	**437**	Documentary Production	Emphasizes individual production projects of the student's own conception and design utilizing studio, field, and postproduction techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.5 GPA; JMC 345 with C or better OR Graduate Mass Communication student
JMC	**440**	Magazine Writing	Writing and marketing magazine articles for publication. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	**445**	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**451**	Photojournalism II	Emphasizes shooting and Photoshop skills for newspaper and magazine assignments. Film and digital photography, flash and studio lighting. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communications student; JMC 351 with a C or better or currently enrolled; 2.5 minimum cumulative GPA OR Graduate Mass Communication student
JMC	**452**	Photojournalism III	Continued practice in shooting (film and digital) and Photoshop skills for newspapers and magazines. Emphasizes single images, picture stories, editorial illustrations, and portfolio development. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 451 with C or better OR Graduate Mass Communication student
JMC	**460**	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 425 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students

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JMC	**465**	Precision Journalism	Advanced reporting methods using Internet research and data analysis tools for beat and investigative stories. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 301 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students
JMC	**470**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**472**	Media Management	Management principles and practices, including organization, procedures, policies, personnel problems, and financial aspects of station management.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; MCO 200 (or JMC 200) with C or better; Minimum 2.50 GPA OR Graduate Mass Comm student
JMC	**473**	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better
JMC	**475**	Television Newscast Production	Writing, reporting, and production of the television newscast. May be repeated once for credit. Fee.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student ; JMC 330 with C or better or currently enrolled; 2.50 cumulative GPA OR Graduate Mass Communication student
JMC	**478**	Cronkite News Service	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student; JMC 301 or JMC 330 with C or better
JMC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
JMC	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
JMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
JPN	**101**	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201,202, 309,310,311,312,313,314,321
JPN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 102 with a C or greater or in progress & may not enroll in class if received a D or better in JPN 202,309,310,311,312, 313,314,321
JPN	**202**	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 201 with a C or greater or currently enrolled
JPN	**206**	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: JPN 101 with C or better
JPN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	**301**	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: JPN 202 with C or better
JPN	**302**	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 301 with C or better
JPN	**309**	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 202 with C or better
JPN	**310**	Japanese Oral Communication II	Continued development of oral/aural sills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 309 with C or better
JPN	**311**	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 202 with C or better
JPN	**312**	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 311 with C or better
JPN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**401**	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	Pre-requisites: JPN 302 and SLC 202 with C or better
JPN	**414**	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 with a grade of C or better
JPN	**415**	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 414 with C or better
JPN	**445**	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**485**	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
JPN	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
JPN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**520**	Teaching of Japanese as a Second Language	Theory and practice of teaching Japanese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 445 or 535
JPN	**543**	Japanese Language and Linguistics	Analysis and discussion of linguistic theories applied to Japanese phonology, morphology, and syntax, including psychological, sociological, and historical aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	**585**	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 485 or 585
JPN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
JPN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.	G	
JST	**230**	Intro to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only HST, JST or REL 230
JST	**491**	History of Anti-Semitism	Anti-Semitism means hostility, negative perceptions, and persecution of Jews. Examines the evolution of anti-Semitism in the West from antiquity to modern times. Explains the history of anti-Semitism by looking at the interplay of religious, economic, cultural, and political factors. Special attention given to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of anti-Semitism, ponders the differences and similarities between premodern anti-Judaism and modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 230 (or REL 210) with C or better
JST	**495**	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better

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JST	**496**	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JUS	**105**	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 105 or 305. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Open to undergraduate students who have not received credit for JUS 305; Justice Studies students must have 56 or less earned hours
JUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites:Must have less than or equal to 25 earned hours
JUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	**200**	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**207**	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**214**	Justice Institutions	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**222**	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	**301**	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**302**	Basic Statistical Analysis in Justice Studies	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the justice area.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	CS	Pre-requisites: Must have completed Intermediate Algebra or higher; Justice Stds student OR 2.0 GPA and 25 earned hours and specific students as determined by Justice Stds Depart. OR 2.0 GPA and more than 56 hours and not be a Justice Stds student.
JUS	**303**	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**305**	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 305 or 105. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**306**	Police and Society	Focuses on community policing; critical inquiry of administrative decision making; perspectives on police-citizen violence; street practices; urban policing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**308**	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**310**	Corrections and Justice	Examines the United States prison condition; types of offenders; issues including drugs, gangs, drunk driving, racial discrimination, and "intermediate" punishments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**311**	Crime, Prevention, and Control	Examines prevention and control of crime by a review of contemporary theories, justice agency procedures, and social policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**320**	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**321**	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JUS	**323**	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**325**	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**329**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**332**	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**335**	Organized Crime	Nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**350**	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**352**	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**360**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**374**	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**375**	Justice and the Mass Media	Surveys the impact of mass media and popular culture on social justice, including criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**382**	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**385**	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 2.00 GPA; minimum 12 semester hours; If Justice Studies student, must be enrolled or earned J-1 Core Status or earned Capstone Status
JUS	**404**	Imperatives of Proof	Issues of evidence, rules of proof, establishing fact and identity in the justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**405**	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**408**	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**410**	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**415**	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**420**	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**422**	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**425**	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**430**	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**432**	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**435**	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**438**	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**440**	Administration and Justice	Diversity issues; procedural justice and service delivery; relationships between state and economic forces, including processes of regulation; state administrative apparatuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**444**	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**445**	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**450**	Alternatives to Incarceration	Investigates various alternatives to incarceration; advantages/disadvantages; major issues including net widening, cost effectiveness, risk assessment, community crime prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**452**	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social ,and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**460**	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**463**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**465**	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**467**	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**469**	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**470**	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	**474**	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**477**	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**479**	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
JUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Justice Studies MS or PHD student
JUS	**501**	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**503**	Crime and Social Causation	Theories of deviance and crime as they relate to social policies and specific response of the justice complex.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**509**	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**521**	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**542**	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**550**	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**555**	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**560**	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**570**	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**575**	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**579**	Political Deviance	Seminar examines the politics of deviance by integrating the study of conflict with aspects of social organization, especially state formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**588**	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

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JUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**610**	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**620**	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	**630**	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	**640**	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	**650**	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**660**	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student
JUS	**669**	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		

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JUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
KE	**211**	Chemical Process Calculations		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	2.		
KE	**461**	Process Control		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
KIN	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**101**	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**110**	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		Pre-requisites: Must be a student in one of the following: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology.
KIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
KIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**205**	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**310**	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**334**	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed BIO 201 or ZOL 201 with a grade of C or greater or be currently enrolled; Must have completed BIO 202 with a grade of C or greater or be currently enrolled
KIN	**335**	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 (ZOL 201) and BIO 202, PHY 111, and KIN 101 (or KIN 200) with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with a C or better
KIN	**340**	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200), BIO 201 (ZOL 201) and BIO 202 (ZOL 202) and one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	**345**	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200) with a C or better; PGS 100 or PGS 101 with a C or better; BIO 201 (ZOL 201) with a C or better
KIN	**348**	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**352**	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C	Pre-requisites: KIN 101 (or KIN 200) with C or better; PGS 100 or PGS 101 with C or better
KIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**412**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed KIN 335 with a grade of C or better; If you received credit in KIN 512, you may not enroll in KIN 412
KIN	**413**	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 335 or KIN 335 with a grade of C or greater or be currently enrolled in KIN 335
KIN	**414**	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 335, KIN 335 or PED 335 with a grade of C or greater or be currently enrolled in KIN 335; Must have completed EPE 240, KIN 340 or PED 340 with a grade of C or greater or be currently enrolled in KIN 340

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**421**	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**423**	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**440**	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 532, may not enroll in KIN 440
KIN	**441**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 531, may not enroll in KIN 441
KIN	**442**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 442 or 536.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater in KIN 340. Credit is allowed for only KIN 442 or 536.
KIN	**443**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or better in KIN 340. Students who have credit for KIN 533, may not enroll in KIN 443
KIN	**444**	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**445**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 445 or 535.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**448**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 520, may not enroll in KIN 448
KIN	**450**	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 352 or KIN 352 with a grade of C or greater or be currently enrolled in KIN 352
KIN	**452**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 522, may not enroll in KIN 452
KIN	**460**	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		Pre-requisites: Must be an Honors student
KIN	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
KIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Academic Level may not equal Freshman
KIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Must be BS Kinesiology student; Seniors only
KIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
KIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**501**	Research Statistics	Statistical procedures; sampling techniques; exercise testing, exercise prescription, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**505**	Applied Exercise Physiology Techniques	Investigative techniques used in the applied exercise physiology lab. Emphasizes pulmonary function, body composition, and cardiorespiratory assessment.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**510**	Introduction to Biomechanics Research Methods	Applies mechanics to human movement analysis. Includes consideration of 2-D imaging techniques, force measurement, electromyography, and data processing methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**512**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**520**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	**521**	Motor Development, Control, and Learning	Theory and research on motor skill acquisition, including learning/control and development (i.e., growth, children and exercise, and development learning).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**522**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	**530**	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**531**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	**532**	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	**533**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	**535**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 535 or 445.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**536**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 536 or 442.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking). Students who have credit for KIN 442, may not enroll in KIN 536
KIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**598**	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**610**	Advanced Topics in Biomechanics	3-D imaging techniques, data analysis theory, and integration of biomechanics research tools; includes original research project.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**621**	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KOR	**101**	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and wrtiting skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
KOR	**102**	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:KOR 101 with a grade of D or better, or currently enrolled
KOR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**201**	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 102
KOR	**202**	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 201
KOR	**250**	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
KOR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**313**	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety or Korean written styles.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 202
KOR	**314**	Third-Year Korean II	Continuation of KOR 313.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 313
KOR	**347**	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
KOR	**350**	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	H	
KOR	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
KOR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
KOR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KOR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	**485**	International Field Studies in Landscape Architecture	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
LAP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAT	**101**	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
LAT	**102**	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: LAT 101
LAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**201**	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 102
LAT	**202**	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 201
LAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**421**	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**422**	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
LAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
LAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
LAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
LAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAW	**105**	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3.		
LAW	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1.		Pre-requisites: Freshman standing
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	LAW	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**515**	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**516**	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**517**	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**518**	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**519**	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

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LAW	**520**	Contracts	Continuation of LAW 515 focusing on contract interpretation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**522**	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**523**	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**524**	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**526**	Property	Nonpossessory interests in property (easements, covenants, servitudes); nuisance; land use planning; and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**527**	Civil Procedure	Continuation of LAW 518; addressed subjects in LAW 518 in greater depth as well as personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**529**	Law and the Regulatory State	Introduces the importance, origins, and methods of interpreting statutes, regulations, and court rules.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**581**	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Reserved seat pre-requisites: MLS Students only
LAW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**596**	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Reserved seat pre-requisites: MLS Students only
LAW	**597**	Visiting Student Program		N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**601**	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**602**	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	**603**	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**604**	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**605**	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**606**	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student

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LAW	**608**	Business Associations I	Partnerships, limited partnerships, and small business corporations. Includes a brief introduction to accounting. Detailed analysis of the problems of forming a close corporation, state law duties of care and loyalty, management, dividends and redemptions, issuance of stock, internal dispute resolution, dissolution, and the general law of derivative actions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**609**	Business Associations II	Interrelationship of federal and state law and a brief introduction to corporate finance (1933 Act). Broad overview of large company regulations including reporting rules, proxy regulation, insider trading, sale of control, tender offers and takeovers, and going private.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**610**	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**611**	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Must be College of Law student
LAW	**612**	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**613**	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**614**	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**615**	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**616**	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**617**	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**618**	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**619**	Payments	Law of credit obligations and payment devices. Focuses on Articles 3, 4, and 4A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**620**	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**621**	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**622**	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**623**	Commercial Torts	Involves an analysis of actionable wrongs against a business entity or against proprietary rights held by that entity, covering the entire spectrum of private remedies for competitive wrongs.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**624**	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	**625**	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**626**	Advanced Legal Writing	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Must be Juris Doctor Candidate (LWJDJD); Students who have credit for LAW 634, may not enroll in LAW 626

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LAW	**627**	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**628**	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**629**	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**630**	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**631**	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**632**	Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**633**	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**635**	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**636**	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**637**	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	4.		Pre-requisite: College of Law student
LAW	**638**	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**639**	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**640**	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**641**	Securities Regulation II	Securities laws affecting the purchase and sale of publicly-traded securities.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**642**	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**643**	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**645**	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**646**	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**647**	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**648**	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**649**	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**650**	Health Law	Introduces health law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**651**	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**652**	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**653**	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**654**	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student

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LAW	**655**	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**656**	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**657**	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**658**	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre Requisites: Law Students Only
LAW	**659**	Intellectual Property Portfolio Management	Covers business/law dynamics in the technology sector.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**660**	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**661**	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**662**	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**663**	Prisoner Rights	Provides overview and basic understanding of the rights of prisoners within the United States penal system. Emphasizes prisoners¿ civil rights under the U.S. Constitution and 42 U.S.C. Section 1983, including claims such as access to courts, conditions of confinement, religious freedoms, excessive use of force, ineffective medical assistance. Analyzes prison culture and models for reform, state post-conviction rights of appeal, the death penalty, parole, and commutation. Includes optional tour of a maximum security prison (which is much different from the county jail tour) and guest speakers (correctional officers and former inmates).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**664**	Intellectual Property	Surveys the laws conventionally grouped as ¿intellectual property.¿ with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**665**	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**697**	Visiting Student Program		N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**701**	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**702**	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**703**	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**704**	Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**705**	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**706**	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**707**	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**708**	Gender, Sexuality, and the Law	Examines assumptions made in the law about gender and sexuality and the impact of those assumptions on the application of the law.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**709**	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**710**	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**712**	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**713**	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**715**	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**718**	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**719**	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**720**	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**721**	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**722**	Mexican Law	Comparative overview of Mexican law. Poses questions regarding the proper role and function of a legal system.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**723**	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**724**	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**725**	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**733**	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**734**	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**735**	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**736**	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**737**	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group¿s goals. In addition to analyzing the definition of a ¿cult,¿ the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members¿ families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**738**	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	**739**	Economics and the Law Seminar	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**745**	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**768**	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**770**	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal. May be repeated for credit for a maximum of 5 semester hours.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**771**	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**772**	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**773**	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**774**	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**775**	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**776**	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**777**	Technology Ventures Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**778**	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**781**	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**782**	Independent Study	See LAW 781.	N	IND	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**783**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**785**	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**795**	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1.		
LAW	**797**	Visiting Student Program		N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	0.		
LDE	**361**	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture students only; Co-requisites: LTC 343
LDE	**362**	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	**363**	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	**461**	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	**462**	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LDE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
LDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GRD	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
LES	**305**	Legal, Ethical, and Regulatory Issues in Business	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey BA or BS student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.5 ASU cum GPA, OR be a graduate student.
LES	**306**	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-Requisites:Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	**380**	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR Non degree or Grad student.
LES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	**411**	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
LES	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
LES	**532**	Negotiation Agreements	Develops negotiation competencies to build partnerships and create lasting agreements with internal/external customers, suppliers, work teams, and external constituencies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: MBA student
LES	**579**	Legal and Ethical Issues for Business	Managerial decision making within the bounds of ethics, social responsibility, and legal and regulatory constraints. Strong international focus.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA student
LES	**581**	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**582**	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LIA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		

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LIA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
LIA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**301**	International Organizational Behavior	Educates students to lead others in the intra- and interorganizational relationships in multinational firms operating in complex global environments. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management and Leadership student in the Leadership in International Management plan with either a Professional or Conditions status.
LIM	**303**	Negotiation and Conflict Resolution Strategies Across Cultures	Explores the impact of cultural differences on international negotiations and subsequent application of this knowledge to conflict resolution processes. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**401**	Advanced Topics in International Leadership	Provides an overview of the most current leadership theories and practices to develop students as leaders in crosscultural contexts. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
LIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		
LIM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		
LIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**510**	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	**511**	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**513**	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences				

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	**514**	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**515**	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**516**	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	**520**	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**521**	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**522**	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**523**	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**524**	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
LIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
LIN	**610**	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**614**	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**615**	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**616**	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**617**	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**620**	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
LIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
LIS	**510**	Computers and Technology in the School Library	Library uses of technology and computers. Fundamental concepts and issues in library media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**533**	Current Library Problems	Critical analysis of current practices and problems in school librarianship.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**540**	Classification and Cataloging	Descriptive cataloging and Dewey Decimal Classification of print and nonprint library materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**561**	Selection of Library Materials	Principles and procedures used in the selection of materials for the school library.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**565**	Literature for Hispanic Youth/Literatura para Jóvenes Hispanoparlantes	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**571**	Basic Reference Resources	Provides reference service in the school library. Content and use of basic resources.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**581**	School Library Administration	Administration of K-12 libraries and media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LNP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**310**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
LPH	**311**	Contemporary Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
LPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**411**	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LSC	**241**	Human Genetics	Introduces basic concepts of human heredity and cytogenetics, including Mendelian, molecular, and population genetics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**301**	Life Sciences: History and Method	Integrates philosophy, history, and methods of the life sciences. Includes issue of underrepresentation of minorities in science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**322**	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	**342**	Hormones and Behavior	Examines the short-term and long-term effects of hormones on the behavior of animals, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed BIO 181 or 188 and BIO 182 or 187 with a grade of C or greater or be currently enrolled.
LSC	**347**	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed BIO 181 or 188 and BIO 182 or 187 and CHM 116
LSC	**348**	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: must have completed BIO 187, BIO 188, CHM 113, and CHM 116 with a grade of C or greater and be co-enrolled in LSC 347.
LSC	**350**	Premedical Professional Seminar	An opportunity for students who anticipate a career in any area of medicine to explore the realities of the field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 or 188, BIO 182 or 188, BIO 353 or LSC 353, and BIO 340 or LSC 347 with C or better
LSC	**354**	Developmental Anatomy Lab	Experimental studies of developmental processes in animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**359**	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	**360**	The Biology of Human Experience	Introduces the evolutionary origins and characteristics of humans as they are reflected in morphology, physiology, ecology, and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed BIO187 and BIO188 with a grade of C or greater or be currently enrolled.

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LSC	**361**	Human Sexual Biology	Human sexuality from a biological and integrative perspective, including comparisons to other vertebrates and examination of social, behavioral, and physiological factors. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**362**	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**363**	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: BIO 182 (or BIO 187), BIO 181 (or BIO 188), BIO 340 (or LSC 347), LSC 353 and CHM 234 with C or better
LSC	**365**	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**430**	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: must have completed BIO187/182, BIO188/181, and CHM116/115 with a grade of C or greater or be currently enrolled.
LSC	**432**	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed either BIO353, LSC353, or LSC359 with a grade of C or greater or be currently enrolled.
LSC	**434**	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO187 or 182 with C or better; BIO188 or 181 with C or better; LSC 320 or BIO 320 with C or better
LSC	**447**	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**450**	Premedical Externship	Provides hands-on experience in a hospital setting for premedical students.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: LSC 350 with C or better
LSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**486**	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6		
LSC	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
LSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
LSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
LSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**343**	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: LDE 361
LTC	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MA	**513**	Algebraic Topology	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAE	**100**	Introduction to Mechanical and Aerospace Engineering	Introduces mechanical and aerospace engineering, design process, teaming, the profession of mechanical and aerospace engineering, computer models in engineering, communication skills, CAD tools, and programming tools. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites: Aerospace or Mechanical Engineering student
MAE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**212**	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mech & Aero student; PHY 121 C or better; Pre/Co-requisite: MAT 274 or 275 C or better OR Non Mech & Aero student; PHY 121; Pre/Co-requisite: MAT 274 or 275
MAE	**213**	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: CEE 210, CEE 211 or MAE 212 with C or better; MAT 274 (or 275) with C or better
MAE	**214**	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	**240**	Thermofluids I	Introductory concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mechanical & Aerospace Engineer or Fulton BSE student with MAE 212 with C or better or Non MAE student with CEE 212 (may be co-enrolled) or MAE 212 with C or better
MAE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**313**	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 318 and MAE 360 with C or better
MAE	**318**	Sensors and Controls	Introduces measurement systems, feedback control modelling and dynamics of physical systems, computer simulations and real-time experiments. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5.		Pre-requisites: Mech or Aero BSE student; MAE 212 or CEE 211 with C or better; EEE 202 with C or better
MAE	**322**	Structural Mechanics	Three-dimensional stress analysis, failure theories, energy methods, finite elements, torsion of noncircular members, unsymmetrical bending, beam column, fatigue and fracture. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: MAE BS/BSE student; MAE 213 with C or better, MAT 343 with C or better; Pre/Co-requisite: MAE 384 (with C or better if completed)
MAE	**323**	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites; MAE BSE students; MAE 214 with C or better, MAE 322 with C or better
MAE	**340**	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 240 with a C or better; Pre/Co-requisite: MAE 384
MAE	**341**	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; MAE 212 with a C or better
MAE	**342**	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; MAE 322 with C or better; Pre/Co-requisite: MAE 318 (with C or better if completed)
MAE	**344**	Fundamentals of Aerospace Design	Design theory and design tools applied to aerospace engineering. Engineering drawings, solid modeling, RFP's, Federal Aviation Regulations and military specifications, aircraft sizing, rapid prototyping. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 214, 322, 360 and 384 with a C or better
MAE	**345**	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 213 and MAE 384 with C or better; Pre or Co-requisites: MAE 318 (with C or better if completed) and MAE 384 (with C or better if completed)
MAE	**351**	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	**360**	Aerodynamics	Airfoils and wings, ideal flow, panel methods, boundary layers, finite-difference solutions, wind-tunnel testing. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 with C or better; ENG 102, 105 or 108 with C or better; MAE 384 or CEE 384 with C or better or Co-requisite: MAE 384
MAE	**362**	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 and MAE 384 with C or better
MAE	**372**	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 with C or better
MAE	**382**	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students;MAE 240 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	CS	Pre-requisites: Engineering BS/BSE student; MAT 274 or 275 with C or better; MAT 242 or MAT 343 (or MAT 342 for Non-MAE student) with C or better; Pre or Co-requisite: MAT 272 or MAT 267 (with C or better if completed);Credit only for MAE 384 or CEE 384
MAE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Engineering BS/BSE student
MAE	**400**	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Aerospace Engineering or Mechanical Engineering BSE Seniors; MAE 342 or MAE 362 completed with a C or better
MAE	**404**	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 or ECE 313 with C or better; CEE 384, MAE 384 or ECE 384 with C or better
MAE	**406**	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	**415**	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 with C or better; CEE 384 or MAE 384 with C or better
MAE	**417**	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**426**	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 322 with C or better
MAE	**434**	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 382 with C or better
MAE	**435**	Turbomachinery	Design and performance of turbomachines, including steam, gas and hydraulic turbines, centrifugal pumps, compressors, fans, and blowers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a C or better in MAE 340 or 360
MAE	**436**	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; Credit is allowed for only MAE 436 or 536
MAE	**442**	Mechanical Systems Design	Applies design principles and techniques to the synthesis, modeling, and optimization of mechanical, electromechanical, and hydraulic systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 342 or MAE 344 with C or better
MAE	**446**	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; MAE 382 with C or better
MAE	**447**	Robotics and Its Influence on Design	Robot applications, configurations, singular positions, and work space; modes of control; vision; programming exercises; design of parts for assembly.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**455**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better; Credit is allowed for only MSE 470 or 455
MAE	**462**	Space Vehicle Dynamics and Control	Attitude dynamics and control, launch vehicles, orbital mechanics, orbital transfer/rendezvous, space mission design, space structures, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**463**	Propulsion	Fundamentals of gas-turbine engines and design of components. Principles and design of rocket propulsion and alternative devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 362 with C or better; MAE 384 with C or better
MAE	**465**	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE plans; MAE 340 or MAE 362 with C or better; MAE 462 with C or better
MAE	**466**	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 360 with C or better; Credit is allowed for only MAE 466 or 566
MAE	**468**	Aerospace Systems Design	Group projects related to aerospace vehicle design, working from mission definition and continuing through preliminary design. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 313 with a C or better; MAE 344 with C or better; Pre-or Co-requisite: MAE 463 with C if completed

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MAE	**469**	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student
MAE	**471**	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 or ECE 384 with C or better; Credit is allowed for only MAE 471 or 561
MAE	**480**	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design. Integrated lecture/lab.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; C or better in MAE 214, MAE 345, MAE 465, and EEE 304, or be co-enrolled in EEE 304
MAE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**488**	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in MAE 340 AND a grade of C or better in MAE 342
MAE	**489**	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 488 with C or better
MAE	**491**	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 340 with C or better
MAE	**492**	Honors Directed Study		N	PRA	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Pre-requisites: Must be an Honors student.
MAE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Pre-requisites: Engineering students
MAE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**501**	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**502**	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**504**	Experimental Methods for Thermal and Fluid Processes	Theory and application of optical diagnostics and microsensors for characterizing thermofluid processes. Measurements include laser spectroscopy, velocimetry, particle sizing, and surface properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		
MAE	**505**	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	**506**	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 501 with C or better.
MAE	**507**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 506 with C or better
MAE	**510**	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**512**	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisites: Graduate Engineering student; CEE 536, MAE 510 or MAE 515 with C or better or currently enrolled
MAE	**515**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 completed with a C or better or currently enrolled
MAE	**520**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**521**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	**523**	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; CEE 521 or MAE 520 with C or better
MAE	**524**	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 520 with C or better
MAE	**525**	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 with C or better
MAE	**527**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better
MAE	**536**	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	**540**	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**541**	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**544**	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**546**	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	**547**	Mechanical Design and Control of Robots	Homogeneous transformations, 3-D kinematics, geometry of motion, forward and inverse kinematics, workspace and motion trajectories, dynamics, control, and static forces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**557**	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**561**	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only MAE 471 or 561
MAE	**564**	Advanced Aerodynamics	Perturbation method. Linearized subsonic and supersonic flows. Thin wing/slender body theories. Lifting surface theory. Panel method computation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**566**	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressiblilty effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566
MAE	**571**	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**572**	Advanced High-Speed Flows	Introduces compressible flow. Sound waves and normal shock waves. Quasi-one-dimensional steady flows in variable area ducts with friction, heating, and cooling; unsteady one-dimensional flow, oblique shock waves, Prandtl-Meyer expansions, detonation waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**573**	Viscous Fluid Flow	Mechanics of fluids for flows in which the effects of viscosity are significant. Exact and approximate solutions of the Navier-Stokes system, laminar flow at low and high Reynolds number.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 completed with C or better or currently enrolled

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MAE	**574**	Fluid Transport in Micro/Nanoscale Devices	Focuses on fundamental fluid transport physics in micron and nanometer scale devices. At small length scales fluid motion and transport is governed by electromagnetic, interfacial, and stochastic phenomena that differentiate these flows from typical macroscale flows. In microscale devices these phenomena enable new and high-performance separation, concentration, control, and diagnostic processes. Core concepts are presented along with discussions of state-of-the-art micro and nanoscale total analytical devices. Requires knowledge of fluid mechanics, electrostatics, heat and mass transfer, and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Fulton School of Engineering graduate students only
MAE	**575**	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**577**	Turbulent Flow Modeling	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**578**	Environmental Fluid Dynamics	Studies fluid motions in Earth's hydrosphere and atmosphere on local and regional scales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		
MAE	**581**	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**585**	Conduction Heat Transfer	Basic equations and concepts of conduction heat transfer. Mathematical formulation and solution (analytical and numerical) of steady and unsteady, one- and multidimensional heat conduction and phase change problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**586**	Convection Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**587**	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**589**	Heat and Mass Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MAE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		

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MAE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Graduate Engineering student
MAE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		
MAE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAK	**101**	Elementary Macedonian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**102**	Elementary Macedonian	See MAK 101.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**201**	Intermediate Macedonian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**202**	Intermediate Macedonian	See MAK 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**311**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**312**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**411**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**412**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**501**	Models of Inquiry for Contemporary Issues	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**502**	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**505**	20th-Century Thought: Concepts of Change, Culture and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theoriesm and paradigms in 20th-century thought.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**510**	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for IAS 430, may not enroll in MAS 510
MAS	**511**	Technology, Environment and Humanity	Critically analyzes technology in relation to human and environmental issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**512**	History and Philosophy of the Social Sciences	Examines the development, historical context, and long-term importance of major theories of human nature from the 17th century until today.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		

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MAS	**513**	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**529**	Latinas and Latinos, Schooling, and Social Inequality	Advanced interdisciplinary understanding of the issues facing Latinas and Latinos in K-16 schooling in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**553**	Latin American Cities	Interdisciplinary study of Latin American world cities (e.g., Mexico City, Santiago) emphasizing integration with U.S. cities, including Los Angeles and Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**585**	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	THE	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher

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MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-5		Pre-requisites: ALEKS Math Placement Test with a score of 40% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**242**	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or 267 with C or better
MAT	**340**	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**351**	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 270 (or MAT 251 or MAT 265) with C or better
MAT	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MAT	**362**	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 274 (or MAT 275) with C or better
MAT	**370**	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series. Not open to students with a C (2.00) or higher in MAT 371. Credit is allowed for only MAT 370 or 371 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with a C or better
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**372**	Advanced Calculus II	Open, closed, compact sets in Rⁿ continuity, differentiation, partial differentiation, integration in Rⁿ. Inverse/implicit function theorems. Not open to students with credit in MAT 460.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 371 with "C" or better;Co-requisite: MAT 342 (or MAT 343) with "C" or better. Not open to students with credit in MAT 460
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**410**	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) with C or better
MAT	**415**	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or MAT 242 or MAT 343) with C or better C or better

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MAT	**416**	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or 242, or 343) with C or better
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**420**	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 205 and MAT 274 (or 275), and MAT 342 (or MAT 343) with a C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**423**	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 342 (or MAT 343) with a grade of C or better
MAT	**425**	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) with C or better. MAT 371 recommended.
MAT	**442**	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**444**	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 442 or MAT 443 with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**447**	Cryptography	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 100 (or CSE 100 or CSE 205); MAT 300 (or MAT 243) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**451**	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better.
MAT	**452**	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended.
MAT	**460**	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems. Not open to students with credit in MAT 372.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended. Students with credit for MAT 372, may not enroll in MAT 460
MAT	**461**	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or MAT 267 with a C or better
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**472**	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line. Appropriate as preparation for MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**473**	Intermediate Real Analysis II	Analysis in Rn: implicit function theorem, introduction to manifolds, Lebesque integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 472 with C or better
MAT	**475**	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincar-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or MAT 342 or MAT 343) and MAT 274 (or MAT 275) and MAT 370 (or MAT 371) with a "C" or better
MAT	**476**	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or 342 or 343) with C or better; MAT 274 (or 275 or 475) with C or better; MAT 370 (or 371) with C or better
MAT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**485**	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) with C or better
MAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
MAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	**514**	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**515**	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**516**	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**517**	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**518**	Combinatorial Optimization	Systematic development of combinatorial optimization, including linear programming, duality, primal-dual algorithms, network flow algorithms, weighted matchings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**541**	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**542**	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**543**	Abstract Algebra	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**544**	Abstract Algebra	Continuation of MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**545**	Abstract Algebra	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**547**	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**548**	Class Field Theory	Theory of the abelian extensions of global and/or local fields. Students should have previously taken a course in algebraic number theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**570**	Real Analysis	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**571**	Real Analysis	Continuation of MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**572**	Complex Analysis	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**573**	Complex Analysis	Continuation of MAT 572.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**574**	Theory of Ordinary Differential Equations	Systems, existence proofs, singularities, asymptotic behavior of solutions, boundedness of solutions, eigenvalues and eigenfunctions, and perturbation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**578**	Functional Analysis	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**579**	Functional Analysis	Continuation of MAT 578.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

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MAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-5		
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 170 with a grade of C or greater or be currently enrolled OR have completed the Calculus Placement Exam with a score of 36 or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 271 with a grade of C or greater or be currently enrolled.
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT272 with a grade of C or greater or be currently enrolled.
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**350**	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 275 (or MAT 274) with D or better; MAT 343 (or MAt 342) with D or better; Co-requisite: STP 420
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed MAT300 and MAT342 with a grade of C or greater or be currently enrolled.
MAT	**450**	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 40% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MBB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**245**	Principles of Molecular and Cellular Biology I	Introduces molecular biology, genetic engineering, gene expression/control and evolution, in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	Pre-requisites: CHM 113 with C or better; Pre/Co-requisite: CHM 116 (with C or better if completed)
MBB	**247**	Principles of Molecular and Cellular Biology II	Introduces cell biology, metabolism and regulation, bioenergetics, and protein translocation in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 245 (or BIO 188) with a C or better
MBB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: MBB 247 or BIO 340 with a C or better; Students who have credit for BIO 343, may not enroll in MBB 343
MBB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB or PLB 350
MBB	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit is allowed for only BIO or MBB 440
MBB	**444**	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre or Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MIC 445 may not enroll in MBB 445
MBB	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	**490**	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 247 with C or better; BIO 340 with C or better
MBB	**491**	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 343 with C or better; BIO 340 with C or better
MBB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
MBB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MBB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MBB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**501**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Credit is allowed for only ASM, BIO or MCB 506
MCB	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**555**	Advanced Molecular and Cellular Biology I	Study of structural and functional organization of biomolecules and cells, based on current literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
MCB	**556**	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MCB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**701**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MCE	**548**	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
MCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCE	**230**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
MCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**447**	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
MCE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
MCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
MCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCO	**498**	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	N	OPT	College of Public Programs	Arizona State University	1-7		
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
MCO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**200**	Introduction to Electronic Media	Surveys electronic media in the United States: history, regulation, organization, programming, and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**302**	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Communication student with a cumulative GPA of at least 2.0
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB & H	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**421**	Media Problems	Trends and problems of the mass media, emphasizing editorial decisions in the processing of information.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Minimum 2.25 GPA; Journalism & Mass Comm student OR Graduate Mass Communications student
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	G	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**435**	Emerging Media Technologies	Surveys new mass communication technologies and media distribution platforms in a convergent mass media environment.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**440**	Applied Media Research	Design, conduct, and analysis of applied media research. Students participate in the Cactus State Poll.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**450**	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	HU	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**455**	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity¿s most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**460**	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	C	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**465**	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**470**	Issues Management and Media Strategy	Strategic aspects of media planning and management in public relations, public affairs, crisis communication lobbying, media ethics, and government relations.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR Graduate Mass Communication student
MCO	**473**	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Pre-requisites: Must be an Honors student
MCO	**493**	Honors Thesis		N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Pre-requisites: Must be an Honors student
MCO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
MCO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**501**	Newswriting and Reporting	Designed for graduate students in the MMC program who have undergraduate degrees in nonjournalism areas. Objective is to teach fundamentals of writing and reporting. Fee.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**503**	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**505**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**510**	Media Research Methods	Professional approach to online and library research, getting and using public records, and investigative journalism techniques.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**520**	Mass Communication Theories and Process	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to various professional communication needs.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**522**	Mass Media and Society	Mass media as social institutions, particularly interaction with government and public. Emphasizes criticism and normative statements.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student

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MCO	**525**	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**530**	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**531**	Advanced Broadcast Reporting	News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**532**	Foundations in Mass Communication Research	Designed for students who have not had a course in academic research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Masters of Mass Communcation and Journalism and Mass Communication PhD students
MCO	**540**	Historical/Legal Methods	Introduces legal and historical methods necessary to conduct qualitative mass communication research.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**560**	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**570**	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisite: Masters of Mass Communication student
MCO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
MCO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	**710**	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism Mass Communication PHD students
MCO	**711**	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student
MCO	**712**	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student

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MCO	**720**	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**722**	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**755**	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication PhD student
MCO	**765**	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	DIS	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
MET	**150**	Introduction to Engineering Technology	Introduces mechanical, manufacturing, and aeronautical engineering technology. Covers aspects of the industries utilizing these majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**160**	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**211**	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	**230**	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**231**	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 160 and MET 230
MET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**300**	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 230 and MET 231 OR MSE 250 OR Manufacturing Technology & Management concentration BAS student
MET	**302**	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: College of Technology and Innovation or Fulton Engineering students
MET	**309**	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**313**	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	**314**	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 313 or MAE 213 or MSE 211 or CON 223 or CEE 213 OR be co-enrolled in MET 313
MET	**321**	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites:AET 312; MET 313; MET 340
MET	**331**	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or CON 223 or MAE 213)

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MET	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: PHY 112 or PHY 131; MAT 266 or MAT 271
MET	**341**	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**344**	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; MET 300 (or MSE 250) or College of Technology and Innovation BAS student in Manufacturing Technology & Management concentration and MET 300
MET	**345**	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**351**	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: EST 210
MET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**396**	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or Senior standing
MET	**400**	Materials and Joining Processes	Effects of joining processes on metals and composites. Thermal cycle effects on solid-state and liquid-solid material transformations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**401**	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: APM 301; students who have credit for MET 501, may not enroll in MET 401
MET	**402**	Advanced Material Joining	In-depth analysis of common materials-joining processes and their process parameters. Includes automation, soldering, and adhesive bonding. Lecture, lab.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**409**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	**410**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 410 or 510.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341 . Students with credit for MET 510, may not enroll in MET 410
MET	**415**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341; students who have credit for MET 515, may not enroll in MET 415
MET	**416**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516
MET	**418**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 418 or 518.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300 or MSE 250. Students who have credit for MET 518, may not enroll in MET 418
MET	**421**	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 313, MET 340
MET	**423**	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 331
MET	**424**	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210; MET 321; MET 421
MET	**426**	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	**427**	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requistes: MET 423; MET 424
MET	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 or MAE 240; Credit is allowed for only EGR or MET 432
MET	**433**	Thermal Power Systems	Analyzes gas power, vapor power, and refrigeration cycles. Components of air conditioning systems. Direct energy conversion. Psychrometry. Analyzes internal combustion engines and fluid machines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: MET 432 OR College of Technology and Innovation MS student
MET	**434**	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432
MET	**435**	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340

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MET	**436**	Turbomachinery Design	Applies thermodynamics and fluid mechanics to the analysis of machinery design and power cycle performance predictions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 OR Technology and Innovation or Fulton Engineering graduate student
MET	**437**	Design for Materials Joining	Uses design principles to analyze structures and determine appropriate weld/braze/solder or adhesive joint size. Uses welding codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300
MET	**438**	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 OR Technology and Innovation or Fulton Engineering graduate student
MET	**440**	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331
MET	**442**	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; Credit is allowed for only MET 442 or 502
MET	**443**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	**444**	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 309; Credit is allowed for only MET 444 or 504
MET	**452**	Implementation of Robots in Manufacturing	Robotic workcell design, including end effectors, parts presenters, and optimum material flow.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351 OR Technology and Innovation or Fulton Engineering graduate student
MET	**455**	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351
MET	**460**	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 and senior status
MET	**461**	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 460
MET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
MET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
MET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Minimum Junior status; College of Technology and Innovation or Fulton Engineering student
MET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Minimum Junior standing; Manufacturing Engineering Tech student OR Technology and Innovation or Fulton Engineering graduate student
MET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**501**	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	**502**	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	**504**	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	**507**	Manufacturing Enterprise	Organization and project management of cellular manufacturing methods, including IIT and lean manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level or greater
MET	**509**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 409 or 509
MET	**510**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 510 or 410.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for MET 410, may not enroll in MET 510
MET	**512**	Introduction to Robotics	Introduces industrial robots. Topics include: robot workspace, trajectory generation, robot actuators and sensors, design of end effectors, and economic justification. Application case studies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level OR Graduate or Non-degree students

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MET	**513**	Advanced Automation	Analysis and design of hard and flexible automation systems. Particular attention to material-handling technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Minimum Senior Standing; College of Technology and Innovation or Fulton Engineering
MET	**514**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	**515**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	**516**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	**518**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 518 or 418.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students who have credit for MET 418, may not enroll in MET 518
MET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
MGT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-3		
MGT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**300**	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, or Business Minor student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better.
MGT	**301**	Principles of Management	Introduces the theoretical and practical foundations of organizations with a focus on individuals, groups, and organizational systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student.
MGT	**302**	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA, and 56 earned hours; Must have completed ECN 212 or 214 with a grade of C or greater.
MGT	**303**	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey School of Business Honors student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 with C or better
MGT	**310**	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.

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MGT	**320**	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better; Pre- or co-requisite MGT 300.
MGT	**350**	Seminar in International Business	Broad exposure to global business; cross-cultural differences across business disciplines; European Union history and future; impact of exchange rates.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; SCM 300 with C or better, OR Non-business student with min 2.0 ASU cum GPA and 56 earned hrs and MGT 380 with C or better
MGT	**380**	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non degree or Grad student.
MGT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre- or Co-requisite: ACC 240 or ACC 241 with C grade or better.
MGT	**400**	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	**410**	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; Pre-requisites MGT 300, and MGT 320 or MGT 303, and ENG 302 with grade of C or better.
MGT	**411**	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	**412**	Managing Human Resources	Overview of domestic and global human resources management topics pertinent to managers and first-line supervisors, as well as those with interest in human resources management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Global Business/Ldrshp Mngt or Global Business/Human Resource student with conditional or professional status, must not have earned credit for HRM 410, AND completed MGT 301 with a grade of C or greater.
MGT	**420**	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	**440**	Entrepreneurship	Provides students with a framework and a skill set for identifying, evaluating, valuing, and developing entrepreneurial opportunities. Challenges students to develop and refine their individual entrepreneurial perspective. Case-based and interactive instruction.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 300 or MGT 310 or MGT 303, and FIN 300 or FIN 302 or FIN 303 completed with a grade of C or better.
MGT	**445**	Business Plan Development	Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	**450**	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey BS or BA student. Pre-requisites ENG 302 or 301, FIN 300 or FIN 302 or FIN 303, MKT 300 or MKT 302 or MKT 303, and MGT 300 or MGT 303 with C or better.
MGT	**459**	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	**460**	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey Management BS student; Pre-requisite MGT 410, and FIN 300 or FIN 302 or FIN 303, and MKT 300 or MKT 302 or MKT 303 with C or better.
MGT	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process.
MGT	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process
MGT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey Management BS student.
MGT	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: Must be an Honors student
MGT	**493**	Honors Thesis		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
MGT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-6		
MGT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**502**	Organization Theory and Behavior	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: Specific W.P. Carey students
MGT	**503**	Human Resources Management: Principles and Skills	Emphasizes strategies for managing human resources and implementing HRM programs and policies that make people more productive and satisfied.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**504**	Ethics and Corporate Social Responsibility	Reviews practical and conceptual tools to deal with the ethical implications of a variety of types of managerial decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**505**	Leadership and the Knowledge Economy	Examines organizational processes that seek synergies between the information processing capacity of IT and the creative capacity of humans.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**512**	Professional Relationship Management	Explores theories, methods, skills, and practices central to development of professional-level expertise in the management of relationships in the workplace.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan.
MGT	**513**	Leadership Skills and Principles	In-depth study of traditional and emerging ways to demonstrate leadership effectively with emphasis on leadership development and coaching activities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan
MGT	**514**	Entrepreneurial Leaders	Applies leadership concepts to entrepreneurial processes. Considers independent entrepreneurs, as well as intrapreneurs within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Applied Leadership & Management graduate plan; MGT 513 with C or better
MGT	**515**	The Neuroscience of Leadership	Provides a rigorous understanding of how the human brain supports leaders in thought, perception, decision-making, affect, action, and social processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Mgt & Leadership graduate student in Acct & Applied Leadership or Applied Leadership & Mgt. Applied Leadership & Mgt students must have completed MGT 502, 503, 504, and 505 with C or better
MGT	**522**	Human Resource Activity and the Management of Diversity	Applies general and human resource management principles to work effectively with a diverse spectrum of people.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**523**	Performance Management	Addresses effective management of people in organizations. Considers evaluating and improving performance using concepts and application.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**559**	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-3		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**561**	Advanced Integrated Project	Capstone project of the high-technology ASU MBA. Student teams develop business plans for new technology-based products.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: MBA degree student
MGT	**570**	Management Consulting	Develops understanding of how internal and external consultants add value.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		
MGT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	0-12		
MGT	**588**	Strategic Leadership	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**589**	Strategic Management	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate W.P. Carey students or Public Administration MPA student
MGT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: MBA degree student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		
MGT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**596**	Global Strategic Management Project	Experientially examines the interaction among the strategic forces within an organization with the competitive forces in the global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in Applied Leadership & Management; MGT 502, 503, 504, and 505 with C or better
MGT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management	1-12		
MGT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-15		
MGT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management	1-15		
MHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	THE	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**538**	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**540**	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Admission to the Masters of Healthcare Innovation
MHI	**542**	Systems Thinking in a Complex Environment	Studies basic and advanced systems principles as they relate to the American healthcare system. Specific emphasis is given to system assessment, designing system interventions, and managing system dysfunction from the innovator's perspective.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHI	**544**	Innovations in Information Systems	Allows students to develop their own learning goals around the innovative use of technology to: critically appraise and evaluate the use of technology to access information; develop skills in maximizing the use of technology to advance practice, thinking, and decision making; advance the integration of human potential and available technology; and develop strategies to address the competing priorities of technology, confidentiality, safety, high reliability principles, full disclosure to the public, and risk management. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**546**	Communication for Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**548**	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**550**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**552**	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**554**	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**561**	Capstone Innovation Project I	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**562**	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**563**	Capstone Innovation Project III	Finalizes the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
MHI	**679**	Biostatistics: Principles of Statistical Inference.	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHL	**140**	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	Pre-requisites:Must be a Music student; must be a freshman
MHL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**201**	Mac Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	CS	
MHL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**341**	Music History	Western music from the Greeks to the present day. Need not be taken in sequence with MHL 342.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 140 with a C or better or currently enrolled; MTC 221 with a C or better or currently enrolled
MHL	**342**	Music History	See MHL 341.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or better
MHL	**344**	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHL	**352**	The Evolution of Jazz	Origin, development, and styles of jazz music and its exponents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MTC 223 with C or better
MHL	**363**	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	Pre-requisites: Music student; MHL 342 with C or better
MHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**438**	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	**439**	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	L & H	Pre-requisites:Must be a Music student; must have completed MHL341AND MHL342 AND MTC223 with a C or greater or be currently enrolled
MHL	**440**	Music Since 1900	Examines stylistic trends, major composers and their works, and cultural contexts in music since 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L or HU	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with a C or greater
MHL	**456**	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**466**	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	(L or HU) & C	
MHL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**492**	Honors Directed Study		N	THE	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MHL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MHL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**532**	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate Music student
MHL	**535**	Medieval Music	Music of Europe in the Middle Ages, Gregorian chant, religious and secular monophony and polyphony to 1400.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**536**	Music of the Renaissance	Music in Europe, with emphasis on stylistic concepts and changes, ca. 1400-1580.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**647**	Topics in American Music	Selected topics in the history of music. Composers working in the Americas with emphasis upon music since 1900.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**657**	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**664**	History of Music Instruments	Surveys the history and development of music instruments in traditional, folk, and art cultures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**668**	Introduction to Ethnomusicology	Introduces the theory and methodology of the discipline, including bibliography, fieldwork, transcription, analysis, and organology.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**670**	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**675**	History of Choral Music	Major choral works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MHL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SG	
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SG	
MIC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SG	Pre-or Co-requisites: MIC 205 or MIC 220 (with a D or better if completed)
MIC	**220**	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requsites: CHM 116 and BIO 188 (or MBB 245)
MIC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**302**	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**314**	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**360**	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**379**	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**381**	Pathogenic Microbes	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 220 and MIC 360 with a C or better
MIC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**401**	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisite: MIC 302 with C or better
MIC	**402**	Service Learning	K-12 tutoring internship; learning activities employed were originally developed as part of the Bio Reach Program. Requires weekly reflective writing. Fee.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4		Pre-requistes: Mic 220, with a grade of C or better
MIC	**421**	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: MIC 302 with a grade of C or better
MIC	**425**	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 420 with C or better
MIC	**426**	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or MBB 245) and BIO 188 (or MBB 247) and BIO 353 with a C or better
MIC	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for PSY 427, may not enroll in MIC 427
MIC	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 420 or PHI 317 with a C or better. Students who have credit for PHI 428, may not enroll in MIC 428
MIC	**441**	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 340 with C or better; MIC 220 with C or better
MIC	**442**	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre/Co-requisite: MIC 441

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MBB 445 may not enroll in MIC 445
MIC	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**470**	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MIC 302 with C or better
MIC	**475**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**485**	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**495**	Undergraduate Research	Supervised research in microbiology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**527**	Neuroimmunology	Studies the mind's influence on immunity and the immune system's influence on the mind, neuroimmunologic diseases, and the neuroimmunological circuitry involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**585**	Molecular Virology	Selected topics concerning molecular aspects of eukaryotic virus replication and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3-4		
MIC	**443**	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance. Not open to students with credit in MIC 205.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: BIO 353 or LSC 353 with C or better; LSC 445 or MIC 444 with C or better or co-enrolled in MIC 444
MIC	**444**	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SG	Pre-or Co-requisites: MIC 205 or MIC 220 (with a D or better if completed)
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MIS	**101**	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**102**	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**201**	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**202**	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**205**	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIS	**301**	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**302**	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**303**	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**401**	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**402**	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**410**	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**412**	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Pre-requisites: Must be an Honors student
MIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0.		
MKT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	**300**	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ECN 211 or ECN 212 with a grade of C or better.
MKT	**301**	Fundamentals of Marketing	Examines the role and process of marketing within the society, economy, and business organization.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisite(s): School of Global Management and Leadership student with Professional OR Conditional status
MKT	**302**	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W.P. Carey Marketing BS student; ACC 241 and ECN 221 with C or better
MKT	**303**	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey School of Business Honors student; ACC 241, 242 or 271 with C or better; ECN 221 or ECN 231 with C or better; Credit is allowed for only MKT 300, 302 or 303
MKT	**352**	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	**360**	Seminar in International Business	Broad exposure to global business and cross-cultural differences. Emphasizes the European Union history and future and the impact of financial issues on marketing practices. Lecture, discussion, group work.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W. P. Carey BS or BA student OR Non-business student with min 2.5 ASU cum GPA and min 56 earned hours; SCM 300 with C or better
MKT	**365**	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with a minimum 2.5 ASU cum GPA, 2.5 and 56 earned hours; MKT 300 or MKT 302 or MKT 303 with C or better
MKT	**370**	Professional Sales Skills	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**390**	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MKT	**391**	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**393**	Essentials of Applied International Marketing	Travel to companies outside the United States to benchmark and assess cross-cultural marketing practices. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree seeking student OR be a Graduate student
MKT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisite: Non marketing student; Minimum cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**395**	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	**402**	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3-4		Pre-requisite: W.P. Carey BS or BA student or non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 352 with C or better
MKT	**410**	Sales and Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with minimum 2.5 ASU cumulative GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**413**	Marketing Research Concepts and Practice	Research techniques for collecting, analyzing, and interpreting marketing information. Includes design and completion of a client-sponsored, industry-based research project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		
MKT	**414**	Global Strategic Marketing	Examines marketing and marketing communication strategy development, and evaluation in the context of global markets and organizational objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		Pre-requisite: Global Mgt Marketing or Int'l Studies student with conditional or professional status; MKT 300, MKT 301 or GLB 301 with C or better
MKT	**415**	Promotion Management	Market positioning and integration of promotional activities and marketing communications of the firm, including advertising, personal selling, public relations, and sales promotion.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cumulative GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**420**	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**425**	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with a minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**430**	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA; MKT 302 or MKT 303 with grade of C or better
MKT	**435**	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**442**	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**452**	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**462**	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402.
MKT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey Marketing BS student; MKT 302 or MKT 303 with B or better
MKT	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Pre-requisites: Must be an Honors student
MKT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 302 or MKT 303 with C or better
MKT	**497**	Honors Colloquium		Y	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours

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MKT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	**502**	Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
MKT	**510**	Understanding Buyer Behavior	Examines behavioral science concepts and theories from the perspective of a marketing researcher who needs knowledge of customer behavior to aid marketing managers as they develop, evaluate, and implement effective marketing strategies for new and existing products.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**513**	Marketing Research for Product Development I	Covers qualitative and interpretive methodologies designed to understand and capture the voice of customers with the aim of infusing research results into the new product development process. Covers methods such as ethnographic and observational research, visual documentation, focus groups, in-depth interviews, and artifact analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**514**	Marketing Research for Product Development II	Provides theoretical and practical knowledge regarding the market assessment and survey research methods that underlie product development in organizations. Focuses on research techniques particularly applicable to the opportunity identification and concept/project evaluation stages of the new product development process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better or currently enrolled
MKT	**515**	Marketing Research for Product Development III	Emphasizes theory and tools useful for refining product development decisions involving narrow product development issues. Covers research techniques that are well suited for fine-tuning new product/service decisions associated with imminent market launch. Covers experimental designs, customer choice modeling, and lab and field test marketing along with appropriate data collection, measurement, and data analysis techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled
MKT	**524**	Services Marketing	Strategies for marketing services emphasizing the distinctive challenges and approaches that make marketing of services different from marketing manufactured goods.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate students; Must have completed HSA 502 or MKT 502 with a grade of C or greater or be currently enrolled
MKT	**530**	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student¿s individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization¿s structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**550**	Innovative Brand Management and Marketing Communication	Focuses on innovative approaches to brand development and management throughout the product life cycle. Emphasizes marketing communications in a fundamental aspect of this process. The demand for innovative practices is especially evident in many aspects, including new media, social media, technology, open sourcing, and customer co-creation of brands. Addresses the role of customer understanding to market success. Brand management and marketing communication are dominant innovation decision areas within marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**560**	Customer Relationship Management	Covers approaches for customer relationship management (CRM) including assessing customer value, prospect/customer identification and targeting, assessment and development of customer life-time value, and customer attrition and retention. Covers CRM issues, techniques, and terminology associated with database marketing and data mining for analytical opportunity identification. Students must complete a project using CRM software in order to demonstrate their command of CRM issues, both conceptually and practically.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled

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MKT	**563**	Marketing Strategy	Planning and control concepts and methods for developing and evaluating strategic policy from a marketing perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate student; MKT 502 with C or better
MKT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		

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MKT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		
MLS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
MLS	**501**	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**502**	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**503**	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MPH	**520**	Principles of Epidemiology	Presents concepts and methods of the science of epidemiology. Introduces concepts important for design and interpretation of epidemiological studies. Critical selection, calculation and interpretation measures of disease frequency and effect appropriate for different study designs. Also introduces important concepts, including confounding, interaction, modeling, and methodological bias. Includes hands-on exercises in evaluation of epidemiologic data and critical review of studies in the current medical and scientific literature germane to urban and mental health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MPH	**530**	Social and Behavioral Determinants of Health	Analyzes the major social variables that influence population health (e.g., poverty, social class, gender, race, family, community, work, behavioral risks, and coping resources) as well as the major theories of health behavior. Provides the knowledge and skills needed to diagnose/understand community, individual, and organizational health behaviors and change processes, especially in cross-cultural settings. Provides a theoretical foundation for planning culturally appropriate public health interventions/programs in the context of the social and ecological models of health behavior.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Master of Public Health
MPH	**551**	Biostatistics II	Covers more advanced statistical concepts, including multiple linear regression, elementary nonparametric techniques, simple contingency table analyses, binary dependent variable models, and survival analysis. Places more emphasis on students' ability to synthesize information and draw conclusions from results. Requires a basic knowledge of SAS programming.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: MPH 550 with B- or better

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MPH	**579**	Biostatistics I	Common descriptive and inferential techniques employed in public health, including graphical and numerical descriptive statistics; elementary probability calculation; point and confidence interval estimation and hypothesis testing for population means, proportions, differences between means and differences between proportions; association and linear regression. Emphasizes interpretation and concepts. Introduces the statistical software, SAS, as a programming tool to accomplish many of these tasks.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to MPH degree program
MPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MPH	**510**	Health Policy and Management	Provides (1) an overview of the U.S. healthcare delivery system and the policies that have shaped it and (2) a foundation in organizational theory and design concepts to support improved system performance. Identifies the dynamics of an organization in terms of its power and political structures, applies creative problem-solving methods, and effectively implements change. Emphasizes the interpersonal and leadership skills required to be effective advocates for public health.	N	LEC	N	OPT	W.P. Carey School of Business	College of Nursing & Health Innovation	3.		
MSE	**100**	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	2.		Pre-requisites: Undergraduate Engineering or University College student
MSE	**111**	Challenges in Materials Engineering	Introduces current issues and concepts of materials engineering, relationship between materials properties, application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	
MSE	**211**	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	**215**	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	**250**	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: CHM 114 or CHM 113; Pre/Co-requisite: CHM 116
MSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**308**	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	Pre-requisite: MSE 208
MSE	**315**	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	CS	Pre-requisites: Engineering BS/BSE students OR Non-Engineering students with a minimum GPA of 3.00; MAT 275 (or MAT 274) with C or better; MSE 250 with C or better
MSE	**330**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.00; MSE 250 or ECE 350 completed with D or better or currently enrolled in MSE 250
MSE	**335**	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 330 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**355**	Materials Structure and Microstructure	Elements of the structure of metals and alloys, measurement of mechanical properties, and optical metallography. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better,OR Graduate Engineering student
MSE	**356**	Materials Structure and Microstructure Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 355
MSE	**358**	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 315 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**420**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with D or better OR Graduate Engineering student. Credit for MSE 420 or MSE 514 only.
MSE	**421**	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 420

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	**431**	Materials Electrochemistry and Corrosion	Introduces terms, the structure of electrified interface and review of thermodynamics of chemical reactions, Faraday¿s Law, electrochemical thermodynamics; metal/ion potentials, redox potentials, hydrogen and oxygen electrode, Pourbaix diagrams, electrical double layer, electrocapillarity, Lippmann equation, electrochemical kinetics, theory of overvoltage, kinetics of corrosion, mixed potential theory, polarization curves, passivation of metals, pitting, fuel cells, electrodeposition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 330 completed with D or better
MSE	**440**	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 440 or 516.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with a D or better or currently enrolled in MSE 355
MSE	**441**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 441 or 512.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better or ECE 350 with D or better
MSE	**450**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; PHY 131; MSE 355; Students who have credit for MSE 510, may not enroll in MSE 450
MSE	**451**	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. Fee.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre-requisites: Engineering BS/BSE student; Co-requisite: MSE 450
MSE	**470**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or Materials minor ; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better. Students who have credit for MAE 455, may not enroll in MSE 470
MSE	**471**	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 with D or better
MSE	**475**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; May not enroll in MSE 475 if received credit for MSE 518, EEE 518, or CHE 518
MSE	**476**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 476 or 519.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better. May not enroll in MSE 476, if received credit for MSE 519
MSE	**482**	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisites: Engineering BS/BSE student; MSE 420 with a D or better or currently enrolled; Pre- or Co-requisites: MSE 470 and MSE 471 (with D or better if completed) OR Graduate Engineering students
MSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**490**	Capstone Design Project	For small groups in fundamental or applied aspects of engineering materials; emphasizes experimental problems and design. Fee.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisite: Engineering BS/BSE student; MSE 482
MSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6		Pre-requisites: Honors students only
MSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6	L	Pre-requisites: Honors students only
MSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Engineering BS/BSE student
MSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-7		Pre-requisite: Engineering BS/BSE or Engineering Graduate student
MSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**510**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	**511**	Corrosion and Corrosion Control	Introduces corrosion mechanisms and methods of preventing corrosion. Topics include: electrochemistry, polarization, corrosion rates, oxidation, coatings, and cathodic protection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	**512**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 512 or 441.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**513**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**514**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	**515**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**516**	Mechanical Properties of Solids	Effects of environmental and microstructional variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 516 or 440.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**517**	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requsiites: Fulton Engineering Graduate students. If you have credit in CHE 518, EEE 518, or MSE 475 you may not enroll in MSE 518
MSE	**519**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 519 or 476.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**520**	Theory of Crystalline Solids	Anisotropic properties of crystals; tensor treatment of elastic, magnetic, electric and thermal properties, and crystallography of Martensitic transformations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**521**	Defects in Crystalline Solids	Introduces the geometry, interaction, and equilibrium between dislocations and point defects. Discusses relations between defects and properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**523**	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**524**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only CHM 541 or MSE 524
MSE	**525**	Physics of Materials	Teaches fundamental concepts of applied physics as related to the solid state. Wave-particle duality and the Schrodinger equation; chemical cohesion, bonds and energy bands in metals and insulators; optical, electronic, and magnetic properties. Requires a basic knowledge of differential equations; linear algebra; and electrical, magnetic, and optical properties of materials. A course in modern physics is highly recommended, but not required.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**526**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 511 or 481.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**527**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Students who have credit for PHY 482, PHY 512, or NAN 512, may not enroll in MSE 527
MSE	**540**	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only NAN, MSE or PHY 546
MSE	**550**	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only MSE, NAN, PHY or SEM 552
MSE	**553**	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-3		Prerequisite(s): degree- or nondegree-seeking graduate. Corequisite(s): MSE 552 (or PHY 552). Credit is allowed for only MSE 553 or PHY 553
MSE	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**555**	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**561**	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**562**	Ion Implantation	Includes defect production and annealing. Generalized treatment, including ion implantation, neutron irradiation damage, and the interaction of other incident beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**565**	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**570**	Polymer Structure and Properties	Relationships between structure and properties of synthetic polymers, including glass transition, molecular relaxations, crystalline state viscoelasticity, morphological characterization, and processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**571**	Ceramics	Includes ceramic processing, casting, molding, firing, sintering, crystal defects, and mechanical, electronic, and physical properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**573**	Magnetic Materials	Emphasizes ferromagnetic and ferrimagnetic phenomena. Domains, magnetic anisotrophy, and magnetastriction. Study of commercial magnetic materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		

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MSE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	**601**	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**602**	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**755**	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Doctoral Music students
MTC	**123**	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Must be a music student in the music composition (FAMUSTCBM) plan
MTC	**125**	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sightsinging and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**221**	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 125 with C or better
MTC	**222**	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 221 with C or better
MTC	**223**	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		

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MTC	**315**	Modern Arranging	Techniques in arranging for the contemporary jazz, radio, television, and studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; MTC 223 with C or better
MTC	**316**	Modern Arranging	Continuation of MTC 315.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	**320**	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**321**	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**323**	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Bachelor of Music student
MTC	**327**	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**422**	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; Passed audition
MTC	**425**	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**428**	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC223 with a C or greater or be currently enrolled
MTC	**429**	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 321 with C or better
MTC	**430**	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**433**	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**436**	Electronic Studio Techniques I	Principles of analog electronic music systems and their application in the composition of electronic music. Assumes a thorough knowledge of music notation and intervals.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**437**	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**440**	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**441**	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requsites:Must be a Music student; must have completed MTC 321 AND MUP 236 with a C or greater or be currently enrolled
MTC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**495**	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0.		
MTC	**496**	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MTC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**516**	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**517**	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**518**	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**519**	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**520**	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**523**	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	**525**	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**527**	History of Music Theory	Theory from Pythagoras to the 16th century. Need not be taken in sequence with MTC 528.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**528**	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**723**	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MTC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 180 with C or better
MTE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**380**	Arithmetic in the Elementary School	Historical numeration systems, overview of elementary number theory, including primes, factorization, divisibility, bases, modular systems, linear congruence, and continued fractions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE181 with C or better
MTE	**381**	Geometry in the Elementary School	Informal geometry, including concepts of length, area, volume, similarity, and congruence. Classification of figures, straightedge and compass constructions, and motion geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 380 with C or better
MTE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	C	Pre or Co-requisites: A college level math course
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better; Teacher Education milestone
MTE	**483**	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better
MTE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	**585**	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**587**	Analysis for Teachers	Subject matter in mathematics appropriate for accelerated programs in secondary schools, including analytic geometry and calculus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MTE 180 with C or better
MTE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**588**	Analysis for Teachers		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MU	**502**	Hist Musical Style		N	LEC	N	CNV	Herberger College of the Arts	School of Music	2.		
MUD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
MUD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUE	**110**	Introduction to Music Education	Overview of music education. Orientation to student characteristics, teacher roles, and foundations of philosophy and history. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student
MUE	**161**	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**211**	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	**261**	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional`ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MUE161 with C or better
MUE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**310**	Music in Early Childhood Education	Identifying and understanding musical needs of young children. Methods and materials for program development for classroom teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**311**	Music for Classroom Teacher	Development of the classroom music program in the elementary school. No previous music experience or course work required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**313**	Elementary Music Methods	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisite: Music student
MUE	**315**	General Music in Secondary Schools	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student
MUE	**317**	Educational Methods for Violin and Viola	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**318**	Educational Methods for Cello and String Bass	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**327**	Educational Methods for Trumpet and Horn	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**328**	Educational Methods for Trombone, Euphonium, and Tuba	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**335**	Educational Methods for Guitar	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**336**	Educational Methods for Percussion	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Education student
MUE	**337**	Educational Methods for Flute, Clarinet, and Saxophone	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**338**	Educational Methods for Double Reed Instruments	Teaching and playing skills for music teachers. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**381**	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L	Pre-requisite: Music Therapy student
MUE	**384**	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**385**	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**386**	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**387**	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**388**	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Music Therapy student
MUE	**436**	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy student
MUE	**441**	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**463**	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	**467**	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**475**	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music Therapy student; MUE 463 (MUE 362) with C or better
MUE	**476**	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	**480**	Choral Methods	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**481**	Instrumental Practicum/Methods	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**482**	Instrumental Practicum/Methods	See MUE 481.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**485**	String Practicum/Methods	For students preparing to administer a string program and teach strings at the elementary level.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**489**	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

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MUE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**501**	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups. Prerequisite: graduate student in Music Therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Must be a graduate student in Music Therapy
MUE	**548**	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**549**	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**550**	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**551**	Advanced Studies in Elementary School Music	For experienced teachers; organization and content of K-6 general music classes. Emphasizes teaching music reading and ear training to young children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**552**	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**560**	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**562**	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**564**	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**566**	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**567**	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Must be a graduate Music Therapy student
MUE	**568**	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**569**	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	**570**	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**571**	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**572**	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**573**	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy MM student
MUE	**574**	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**575**	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**579**	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**585**	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**586**	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**754**	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**755**	Historical Research in Music Education	Knowledge and insights related to conducting historical research in music education. Includes development of a mini-proposal for a dissertation on the history of music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**756**	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**757**	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**100**	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0.		
MUP	**111**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**117**	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**121**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**127**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisites: Music students who have passed audition
MUP	**131**	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**132**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Prerequisites: Must be a Music Therapy student; must have completed MUP131 with a C or greater or be currently enrolled
MUP	**133**	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**134**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**141**	Jazz Fundamentals	Principles, methods, and theory of jazz performance and pedagogy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**209**	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**210**	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**217**	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 117 with C or better
MUP	**231**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP132 with C or better
MUP	**232**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP231 with C or better
MUP	**233**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**234**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student

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MUP	**235**	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**236**	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**237**	Fretboard Harmony	Scales, chords, harmony, basic improvisation for the guitar. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**250**	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music students who have passed audition
MUP	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**301**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP 232 with C or better
MUP	**302**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP301 with C or better
MUP	**311**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**317**	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**319**	Recording Studio Techniques	Study of both analog and digital recording methods. Includes lab time on recording console and tape machines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**321**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**327**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Music students who have passed audition
MUP	**337**	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**339**	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**340**	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 210 with C or better
MUP	**344**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**345**	Symphony Orchestra	Over a 4-year period, the student is introduced to the masterpieces of symphony orchestra literature. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**346**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**350**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**352**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**353**	Symphonic Chorale	4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**357**	Women's Chorus	2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**361**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets daily.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**362**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 2 hours per week in fall, 4 hours in spring. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**363**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 2 hours per week. Performing ensemble. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition

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MUP	**370**	Music Theatre: Techniques	Exercises and improvisations for the singer/actor emphasizing body awareness, basic music theater performance skills, and freedom of the vocal and breath mechanisms. Section 1 (Movement for Singers); Section 2 (Expression); Section 3 (Interpretation); Section 4 (Advanced Expression); Section 5 (Advanced Interpretation). Sections 2 through 5 must be taken in sequence. Each section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**371**	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**372**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**373**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**374**	Music Theatre: Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**376**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**377**	Brass Choir	Specializing in public performance of music written for brass instruments. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**379**	Chamber Music Ensembles	Brass, guitar, keyboard, mixed, percussion, string, vocal, and woodwind ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**385**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**386**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**387**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**388**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**440**	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**451**	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**453**	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**454**	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**455**	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**481**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**482**	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Music students who have passed audition
MUP	**487**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Music students who have passed audition
MUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**495**	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**496**	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition

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MUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		Pre-requisites: Music students who have passed audition
MUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**507**	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**508**	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**509**	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**510**	Jazz Keyboard Harmony	Continuation of MUP 509.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**511**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		
MUP	**517**	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**518**	Advanced Improvisation	Continuation of MUP 517.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**521**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**527**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MUP	**540**	Advanced Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**541**	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**544**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**545**	Symphony Orchestra	Masterpieces of symphony orchestra literature. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**546**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**550**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**551**	Repertoire	Literature available for performance in all performing media. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**552**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit for a total of 8 hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**553**	Symphonic Chorale	4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**555**	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**557**	Women's Chorus	2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**561**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**562**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 4 hours per week. May be repeated for credit. Performing ensembl	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		

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MUP	**563**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 4 hours per week. May be repeated for credit. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**570**	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**571**	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**572**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**573**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**574**	Music Theatre: Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**576**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**579**	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**581**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Credit is allowed for only MUP 481 or MUP 581
MUP	**585**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**586**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**587**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**588**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**596**	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**597**	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUP	**671**	Choral Repertoire	Examines large choral/orchestral works to determine their musical and textual characteristics from a conductor's point of view.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**727**	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Doctoral music student with audition
MUP	**751**	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**796**	Solo Performance	May be repeated for credit.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**100**	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**340**	Survey of Music History	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & H	
MUS	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**355**	Survey of American Music	Growth and development of American music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**410**	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**340-W**	Listening to Music	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**349**	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**357**	Aesthetic Perception in Music Performance	2 hours per week. May be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		

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MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
NAN	**505**	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**506**	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311; PHY 315; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
NAN	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
NAN	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples across physics and astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
NAN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NAV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NLM	**160**	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
NLM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 210, PRM 210 or TDM 210
NLM	**220**	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**300**	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 301, TDM 301 or PRM 301
NLM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
NLM	**310**	Volunteer Management	Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**320**	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: For American Humanics students only
NLM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 410, PRM 401 or TDM 401 with C or better; Credit is allowed for only NLM 402, TDM 402 or PRM 402
NLM	**403**	Pre-Internship Workshop	Introduces and prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303, NLM 410, or TDM 372 with C or better; Students who have credit for PRM 403 or TDM 403, may not enroll in NLM 403
NLM	**410**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 410 or 562.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Nonprofit Leadership and Mgmt or Recreation Management (nonprofit emphasis) major; minimum 2.50 cumulative GPA; 45 minimum hours; ENG 102, NLM 210, NLM 220 and MAT 142 or higher with C or better; Credit allowed only for NLM 562 or NLM 410
NLM	**420**	American Humanics Institute	National Management Institute for preparation of nonprofit professionals. Requires out-of-state conference.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-2		Pre-requisites: For American Humanics students only
NLM	**430**	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Senior standing; NLM 220 with C or better
NLM	**435**	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	DIS	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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NLM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Senior standing; NLM 402, NLM 430, PRM 401, PRM 402, TDM 401 or TDM 402 with C or better; TDM 403, NLM 403 or PRM 403 (or REC 350 or REC 440) with C or better
NLM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
NLM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
NLM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**510**	Foundations of Nonprofit Management	Explores the history and role of the nonprofit sector in American society; contemporary issues and delivery systems. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**520**	Financial Management in Nonprofit Organizations	Reviews funding structures utilized by nonprofit organizations; financial tools used by managers; fund raising practices and tools. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**530**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**540**	Volunteer and Human Resources in Nonprofit Organizations	Managing the volunteer and paid staff human resources in nonprofit organizations; practices and theories. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**550**	Philanthropy: Theory and Practice	Provides overview of selected fundraising topics and insight into both the theory and practice of this area.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**555**	Strategic Management for Nonprofit Organizations	Evaluates vital areas of strategic management required for effective leadership of nonprofit organizations. Overview of areas of strategic management that help position nonprofit organizations and leaders to address opportunities and challenges to improve operational effectiveness.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Degree seeking graduate sutdent, or non-degree seeking graduate student
NLM	**560**	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**562**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 562 or 410.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Credit is allowed for only NLM 410 or 562
NLM	**565**	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**570**	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate within the complex management issues they face. Students determine their own skills and development needs regarding potential future employment.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must be a degree seeking graduate student or Non-degree seeking graduate student.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NLM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**584**	Internship		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**610**	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**620**	Critical Issues Facing Nonprofits	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Prerequisite: Master of Nonprofit Studies major
NTR	**100**	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 100 or 241
NTR	**142**	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nutrition (Food/Nutrtn Mngt), Nutrition (Human Nutrition), Nutrition (Dietetics), or Nutrition (Nutrition Comm) student
NTR	**150**	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NTR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**241**	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: CHM 101 or CHM 113 with D or better
NTR	**300**	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: NTR 100 or 241
NTR	**320**	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NTR 100 or 241
NTR	**340**	Applications in Human Nutrition	Applies nutrient metabolism through case studies and product evaluations; special topics in human nutrition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BIO 201; NTR 241
NTR	**341**	Introduction to Planning Therapeutic Diets	Cultural, health, and economic aspects of planning therapeutic diets. Assessments of food and diet composition. Reviews common therapeutic diets. Credit is allowed for only NTR 341 or 345. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed FON 100 or FON 241 with D or better or NTR 100 or NTR 241 with D or better or currently enrolled
NTR	**343**	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**344**	Nutrition Services Management	Organization, administration, and management of food and nutrition services in hospitals and other institutions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: FON 100, FON 241, NTR 100 or NTR 241
NTR	**345**	Development of Healthy Cuisines	Principles and applications of nutrition and medical nutrition therapy; development of healthy cuisines in health and disease states. Credit is allowed for only NTR 345 or 341.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students who have credit for NTR 341, may not enroll in NTR 345

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NTR	**346**	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in FON 241 or NTR 241 or be currently enrolled AND earned D or better or currently enrolled in BIO 202
NTR	**348**	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	**350**	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: NTR 341 with C or better or NTR 345
NTR	**351**	Nutrition and Health Communications	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NTR 100 or 241
NTR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**400**	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed NTR 440, NTR 441, or NTR 444 with D or better or be currrently enrolled AND earned D or better in NTR 341 or be currently enrolled.
NTR	**401**	Professional Practice in Food Service Management	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in NTR 343 or NTR 445 or be currently enrolled
NTR	**440**	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 202 with C or better; NTR 241 with C or better; NTR 340 with C or better; Credit is allowed for only NTR 440 or 540
NTR	**441**	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:You may not enroll in NTR 441, if you have credit for NTR 541; BIO 202 with D or better; BCH 361 with C or better; NTR 241 with D or better
NTR	**442**	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	**444**	Medical Nutrition Therapy	Principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 341 or FON 341 with C or better OR enrolled in NTR 341; BIO 202; Credit is allowed for only NTR 444 or 544
NTR	**445**	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or NTR 241 with D or better; NTR 142 and NTR 343 with D or better; Students who have credit for NTR 545, may not enroll in NTR 445
NTR	**446**	Human Nutrition Assessment Lecture/Laboratory	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned C or better in BCH 361 and earned C or better in NTR 440 or NTR 441; Students who have credit for NTR 446, may not enroll in NTR 546
NTR	**448**	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	**450**	Nutrition in the Life Cycle I	Emphasizes nutritional needs and problems during pregnancy, lactation, infancy, and childhood.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	**451**	Nutrition in the Life Cycle II	Nutritional needs and problems of adults, particularly the elderly.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**492**	Honors Directed Study		N	THE	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NTR	**493**	Honors Thesis		N	THE	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NTR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NTR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**501**	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**521**	Nutrition and Immunology	Critical review of current research on nutrient metabolism, immune function.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**523**	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**525**	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**527**	Energy Balance and Weight Management	Reviews energy regulation, eating disorders, obesity, weight control methodologies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**529**	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**535**	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NTR	**537**	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**539**	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**540**	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 440 or 540
NTR	**541**	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 441 or 541
NTR	**544**	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 444 or 544
NTR	**545**	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 445 or 545
NTR	**546**	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 446 or 546
NTR	**548**	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 448 or 548
NTR	**550**	Advanced Maternal and Child Nutrition	In-depth review of metabolic characteristics and nutritional needs of the pregnant woman, lactating woman, infant, and child.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NTR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NTR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NUR	**310**	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing undergraduate student; Co-requisites: NUR 311, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**311**	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student; Co-requisites: NUR 310, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**314**	Health Assessment for Registered Nurses	Introductory knowledge and skills for systematic physical, psychosocial, and developmental nursing assessment over the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**315**	Methods and Critical Appraisal for Evidence-Based Practice	Scientific and clinical inquiry, research methodology, and critical appraisal in the synthesis of research findings for application in evidence-based nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NUR 310, NUR 311, NUR 394: Psychomotor Skills for Prof Nursing Practice) and NUR 330 with C or better; NUR 320 (or NUR 484: Intro to Nursing Practice I) with Y, OR RN-BSN student: NUR 391; NUR 392 with C or better
NUR	**320**	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Enrollment in upper division nursing program; Co-requisites: NUR 310, NUR 311 and NUR 394: Psychomotor Skills for Professional Nursing Practice
NUR	**323**	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Enrollment in upper division nursing program; NUR 310, 311, 394:Psychomotor Skills for Prof Nurs Pract with C or better; NUR 320 (or 484: Intro to Nurs Pract I) with grade of Y; Co-requisites: NUR 313 or 394:Nursing Concepts Adult Health
NUR	**330**	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**342**	Theory II: Health Integrity and Alterations	Concepts related to selected alterations in health integrity with focus on individuals, families, and groups. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate Nursing student, NUR 381 with C or better
NUR	**364**	Professional Development II: Nursing Research for RNs	Introduces concepts and issues in nursing research. Emphasizes quantitative and qualitative research processes, examination of nursing research literature.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student.
NUR	**391**	Registered Nurse Mobility I: Professional Development	Historical, philosophical, and theoretical bases for professional nursing practice. Enhancement of critical inquiry skills through exploration of selected issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisties: Must be in Nursing
NUR	**392**	Registered Nurse Mobility II: Health and Wellness	Concepts of health integrity and community-based practice and professional nursing roles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisties: Must be in Nursing
NUR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**413**	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**423**	Nursing Practice: Complex Care and Leadership and Management	Applies advanced psychomotor skills, leadership and management principles, and interprofessional collaboration for clients experiencing health alterations across the lifespan in multiple health settings. Fee.	N	LAB	N	P/F	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**430**	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Undergraduate nursing student.
NUR	**431**	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**440**	Theory III: Health Integrity and Alterations for RNs	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student; must have completed NUR 392 with a grade of C or greater.
NUR	**441**	Theory III: Health Integrity and Alterations	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student.
NUR	**444**	Theory IV: Health Integrity and Alterations for RNs	Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 315, NUR 391, TWC 361 with C or better
NUR	**445**	Theory V: Leadership and Management for RNs	Selected theories and concepts of organizations, management, leadership with focus on selected client populations for experienced RNs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**460**	Professional Development III: the Art of Nursing for RNs	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Must be an undergraduate nursing student.
NUR	**461**	Professional Development III: the Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**464**	Professional Development IV for RNs	Capstone professional development course for the RN student.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Must be an undergraduate nursing student.

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NUR	**481**	Nursing Practice III	Lab, clinical experiences. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	7.		Pre-requisites: NUR 313 (394:Nurs Conc for Adult Health), 314 (394:Nurs Conc for Psych/Mental Health), 315, 323 (484:NP Adult Health), 324 (484:NP Psych/Mental Health); Co-requisites: NUR 411 or NUR 498: Nurs Conc for Childbearing & Pediatric Clients
NUR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NUR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**495**	Community Health/Home Health Practice for RNs	Theoretical content related to community and home healthcare. Clinical practice with individual, family aggregates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**496**	Leadership and Management Practice for RNs	Capstone leadership and management experience for the RN student that utilizes patterns of knowing in nursing practice. fee	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Upper Division Nursing Program students
NUR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NUR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate Nursing student; NUR 551 with B or better
NUR	**503**	Adult Acute: Advanced Theory I	Focuses on theoretical, research, and advanced assessment skills required for advanced practice across the acute care continuum.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a MS nursing, AHN or non-degree nursing student; AND must have completed NUR 503 and 564 with a grade of B or better or be currently enrolled.
NUR	**508**	Advanced Nursing Practicum I: Adult Acute Nursing	Required practicum for preparation for advanced practice across the acute care continuum. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisites: Must co-enroll in NUR 503
NUR	**513**	Advanced Practice Nursing Role III	Third of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate Nursing student; NUR 512 with B or better
NUR	**521**	Psychiatric/Mental Health Nursing: Advanced Mental Health Assessment	Theories related to holistic health assessment for the promotion of physical/psychological health; develops skill in mental health assessments.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student
NUR	**526**	Advanced Neonatal Physical Assessment	Develops assessment skills related to neonate/infant, including history-taking, physical, developmental, behavioral, cultural, and genetics assessment to provide comprehensive advanced practice neonatal nursing care. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing MS student or Non-degree seeking Graduate student; Co-requisite: NUR 525
NUR	**527**	Neonatal and Pediatric Pharmacology in Nursing Practice	Examines and discusses the rationale, action, and therapeutic effect for using each class of medications employed in neonatal and pediatric healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**528**	Advanced Developmental and Family-Centered Nursing Care	Provides the foundation for providing advanced nursing care of children that is developmentally supportive, family centered, and culturally competent. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**538**	Understanding & Applying Prin of Evidence-Based Care in Advanced Practice	Understanding how application of evidence-based practice principles assist advanced practice nurses and other healthcare professionals to provide best care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**539**	Generating Internal Evidence and Validating Application of Evidence through Outcomes Management	Assists advanced practice clinicians to provide best care through generating and validating application of evidence using outcomes management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**540**	Teaching Evidence-Based Practice	Focuses on strategies that have been demonstrated as effective methods for teaching evidence-based practice in academic and clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
NUR	**541**	Application of Principles of Mentorship for Change toward Evidence-Based Practice	Assists advance practice nurses and other healthcare professionals to facilitate change toward evidence-based practice through mentorship.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**543**	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on disseminating evidence to advance best practice with an emphasis on advancing EBP in health policy and the media.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**558**	Advanced Pediatric Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, and adolescents. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554,, or co-enrolled.

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NUR	**559**	Advanced Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, adolescents, and adults. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554, or be currently enrolled, or co-enrolled.
NUR	**578**	Gestalt Therapy I	Introduces theory and methodology of Gestalt therapy and its uses for mental health promotion and restoration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**579**	Gestalt Therapy II	Focuses on further development of Gestalt therapy and its application in working with various client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 578 with B or better
NUR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing student
NUR	**581**	Advanced Nursing Practicum I: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be in Nursing MS or Nursing (Comm Health Adv Prac) ; AND co-enrolled in CHP 501 and completed NUR 500 with a grade of B or greater,.
NUR	**582**	Advanced Human Physiology	Analyzes major theories and concepts of human physiology. Explores interrelationship of physiology and health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-3		Pre-requisites: MS Nursing, AHN or non-degree Nursing student; NUR 500, 552 and 554 with B or better
NUR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites:Must be in Nursing MS or Nursing (Comm Health Adv Prac); NUR 500, 551, 552 and CHP 502 with B or better; NUR 581 or 587 with B or better; Co-requisite: NUR 510
NUR	**587**	Advanced Nursing Practicum II: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing MS or Nursing (Comm Health Adv Prac); NUR 581 with B or better; Co-requisite: CHP 502
NUR	**589**	Research Utilization	Emphasizes the synthesis and application of research to an identified clinical nursing problem. Must be repeated for credit.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		
NUR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing Graduate student
NUR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**601**	Professional Role Development in Nursing and Healthcare Innovation	Explores professional identity in nursing education, health policy, and research and how one's identity can influence individual, family, and community engagement in healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student
NUR	**602**	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student; Co-requisite: NUR 605
NUR	**603**	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**604**	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and phlosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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NUR	**605**	Theories Related to Nursing and Healthcare Innovation	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**608**	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**609**	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**610**	EBP: Critical Appraisal/Synthesis-Evidence	Knowledge and skills in critical appraisal and synthesis of evidence to guide best practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**611**	Collaborative Inquiry	Seminar and immersion experience designed to foster student participation in multidisciplinary research teams to address nursing and health problems.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**612**	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**613**	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**614**	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**670**	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: MS Nursing (Nursing Education) or Graduate Certificate in Nursing Education; Pre/Co-requisite: NUR671 with B or better
NUR	**671**	Teaching in Academic and Practice Settings	Analyzes theories, issues, and research related to teaching in nursing. Focuses on the process of teaching/learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	**672**	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**673**	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
NUR	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NUR	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**685**	Geriatric Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
NUR	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**692**	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

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NUR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
OMT	**343**	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**344**	Industrial Organization	Industrial organization concepts. Topics relate to industrial relations, governmental regulations, organizational structure, labor relations, human factors, and current industrial practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**345**	Public Sector Management	Management in government and public agencies. Includes mission, planning and organizing to provide services, human resource issues, conflict resolution, coordination.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**401**	Statistics for Industry	Two-part online statistics with applications for the practitioner in industry. Includes data description, measures of central tendency and variability, probability, tests of hypotheses, regression analysis and analysis of categorical data.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:MAT 117 with a grade of D or better, or currently enrolled
OMT	**402**	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**405**	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**430**	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:School of Technology or Coll of Engr & Appl Sci Non-Degree plan or School of Technology BAS, BS, or MS Tech plan
OMT	**440**	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisites: TMC 346 or BAS, MTECH or Non degree CTI or FSE Engineering students
OMT	**445**	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-10		Prerequisites: Minimum 2.25 GPA AND Minimum Junior standing AND Technology & Innovation BAS or BS student
OMT	**451**	Industrial Distribution and Materials Management	Surveys topics in industrial distribution, including, but not limited to, materials handling, purchasing, receiving, warehousing, traffic, inventory control, and shipping.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MSTech OR must have received a C or greater in TMC346 OR received a D or greater in IST346 or MGT301 (or becirrently enrolled in TMC346 or IST346 or MGT301
OMT	**452**	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MS Tech
OMT	**453**	Safety Management	Development and management of safety programs, education and training, and relationships within an organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Must have received a D or greater in ITC343 or ITM343 or OMT343
OMT	**455**	Industrial Marketing Concepts	Customer and sales strategies for industrial organizations, including current practice and future planning.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Academic Level must be equal to or greater than a Junior AND must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346, OR be in a Schl of Tech Grad Plan
OMT	**456**	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**461**	Operations Management	Introduces supervisory principles as applied to production of goods and services.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: IMC 346 or IST 346 or MGT 301 or (TMC 346 AND APM 301) or STP 420, OR Engr & Tech & Innov: Non Degree or BAS or MS or MS Tech
OMT	**480**	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
OMT	**502**	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**503**	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**504**	Law and Ethics for Technical Professionals	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**520**	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**540**	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**548**	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**549**	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**550**	Industrial Training and Development	Training techniques and learning processes. Planning, developing, evaluating, and managing industrial and governmental programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**552**	Global Management Philosophies	Analyzes and compares significant supervision philosophies developed in various industrial nations and their potential application in the United States.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**560**	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**570**	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:You may not enroll in OMT 570, if you have credit for TMC 470
OMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
OPM	**301**	Operations Management	Introduces the management of service and manufacturing conversion processes, with emphases on quality management and computer applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a Global Management student with conditional or professional status
OPM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	**502**	Management of Operations Technology	Design, control, and improvement of operations technology. Concepts and modeling tools required for strategic decisions in manufacturing and service operations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
OPM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OPM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**300**	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**340**	Public Management and Policy	Develops conceptual, critical, and practical understanding of policy, the policy process, and policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**401**	Statistics	Surveys statistical concepts and techniques with application to public administration. Does not count toward program of study. Satisfies statistics prerequisite requirement for PAF 501 and 502.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**410**	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**411**	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**420**	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**460**	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**492**	Honors Directed Study		Y	LEC	Y	CNV	College of Public Programs	School of Public Affairs	1-3		
PAF	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
PAF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-3		
PAF	**501**	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	**502**	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**503**	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**504**	Public Affairs Economics	Basics of public sector economics, microeconomic and macroeconomic concepts applied to public sector decisions and policies.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**505**	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 with C or better
PAF	**506**	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 completed with C or better or currently enrolled
PAF	**507**	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**508**	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**509**	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	**520**	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		

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PAF	**522**	Public Labor Relations	Rise of public unionism, managerial policy toward unionism, conflict resolution; impact of unionism on budgets, personnel policies, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**523**	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**525**	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**529**	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**530**	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**531**	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**534**	Urban Infrastructure	Covers various types of infrastructure operated by local governments and the issues related to management of those various public assets.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**536**	Urban Policy Making	Analyzes the opportunities and costs of influencing public policy and the roles of officials and bureaucracies in decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**540**	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 505 with C or better
PAF	**541**	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**546**	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**547**	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
PAF	**548**	Women/Politics/Publc Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**549**	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**551**	Computers in Administration	Experience in use of computer technology for public administration problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**562**	Intergovernmental Relations	Evolution, growth, present status, and characteristics of the U.S. federal system of government. Federal-state relations, state-local relations, regionalism, councils of government, interstate cooperation, grants-in-aid, and revenue sharing.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**564**	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**570**	Urban Economics and Public Finance	Examines microeconomics at the intermediate level, along with topics in urban microeconomics focusing on issues of urban finance and taxation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**571**	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**572**	Urban Demography	Focuses on basics of demographic analysis, including natality, migration, and mortality. Emphasizes use of demographic analysis for urban problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**573**	Advanced Regression	Examines more advanced regression topics, such as limited dependent variable analysis, time-series analysis and forecasting techniques, and simultaneity.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 502 with C or better
PAF	**574**	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**579**	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	L	
PAF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	**601**	Seminar:Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**602**	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral PAF student
PAF	**603**	Seminar: Organization and Behavior in the Public Sector	Structure, organization, conduct, and performance of public sector institutions in the administration of public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral student
PAF	**604**	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student; PAF 602
PAF	**610**	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PhD student
PAF	**620**	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student
PAF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-15		
PAF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Public Affairs	1-15		
PE	**123**	Tumbling		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Kinesiology	0.5		
PGM	**100**	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**110**	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**111**	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student

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PGM	**112**	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**113**	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**114**	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**120**	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**130**	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**150**	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**166**	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**200**	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**250**	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**300**	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**350**	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**367**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**400**	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**466**	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
PGM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**244**	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PGS	**270**	Psychology of Adjustment	Principles of mental health, adjustment, conflict, stress, and coping processes derived from clinical and experimental research. Intended for nonmajors; cannot be used for major credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**351**	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes. Open only to students without previous credit for PGS 350.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	
PGS	**365**	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 315 (or 350 or 351) with C or better; PSY 290 with C or better
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**414**	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PSY 290 with C or better
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**441**	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**445**	Child Language and Drawing	Language acquisition and developmental changes in drawing, considered in the context of cognitive developmental stages. Children's representation and communication of knowledge through language and drawing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**451**	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**461**	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PSY 290 with C or better; PGS 350 or 351 with C or better
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**464**	Minority Issues in Psychology	Psychological issues relating to the diversity of human cultural experiences among ethnic minorities in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**467**	Psychology of Magical Beliefs	Psychological nature and bases of magical beliefs and their impact on health behaviors, eating practices, and interpersonal relations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 315 (or PGS 466 or PSY 434) with C or better; PSY 290 with C or better
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must be a Graduate student, either degree seeking or non degree seeking
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**250**	Psychology and Society	Addresses how social and behavioral science theory and research are used to understand behavior related to various social issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**370**	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**473**	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101 with C or better; PGS 341 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**480**	Cross-Cultural Social Psychology	Focuses on patterns of social behavior in individualistic and collectivistic cultures. Includes multidisciplinary research using qualitative and quantitative methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: PGS 101 with C or better; PGS 350 with a C or better
PGS	**482**	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 350 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PGS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PGS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGV	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**300**	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L	
PHI	**301**	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**302**	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**304**	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**305**	Ethical Theory	Current theories about the nature of morality (metaethics) and about what is right and wrong (normative ethics).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**307**	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**308**	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**309**	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**310**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**312**	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**315**	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**316**	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**317**	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**319**	Philosophy of Computing	Philosophical problems surrounding the theory of computation. Turing machines, mind and AI, neural network computing, ethics, and epistemology of computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**320**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**325**	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
PHI	**333**	Introduction to Symbolic Logic	Symbolic techniques, emphasizing deductions and proofs in the propositional and 1st-order predicate calculi.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**335**	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**390**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
PHI	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only PHI 391 or REL 391
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**401**	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**402**	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**403**	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**413**	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**420**	Topics in Philosophy	Course descriptions on file in department. May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 314 with a C or better. Students who have credit for MIC 428, may not enroll in PHI 428
PHI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
PHI	**493**	Honors Thesis		N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
PHI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
PHI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**360**	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Must have completed ENG 101, or 105 with a grade of C or greater, or be currently enrolled in ENG 101, or 105
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHL	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHL	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHS	**110**	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in physical science and physics. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	3.	C	
PHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**505**	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**531**	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**534**	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**540**	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**542**	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**550**	Physics and Astronomy	Astronomy curricula and projects for secondary school, with emphasis on the role of physics in astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**556**	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**560**	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**564**	Light and Electron Optics	Principles and practice of electron-optical instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**570**	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**581**	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		

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PHS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHY	**105**	Basic Physics	One-semester survey of the principles of physics. Primarily for students who intend to take PHY 121, 131 but have not taken high school physics.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**150**	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 270 or MAT 290 with C or better
PHY	**151**	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 271 or MAT 266 with C or better; PHY 150 or PHY 121 and PHY 122 with C or better
PHY	**190**	Seminar: Physics as a Curriculum and a Profession	Seminar for new Physics majors. Instruction and information on curriculum, departmental functions, and professional preparation. Weekly meetings and excursions. Pass/fail grading.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**201**	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	CS	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	**241**	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 131
PHY	**252**	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY131 and PHY132) with C or better
PHY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**302**	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY201 with C or better
PHY	**310**	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	**311**	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	**314**	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	**315**	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**333**	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY132 with C or better
PHY	**334**	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY 132 with C or better. Co-requisites: Phy 314 or PHY 361 or CHM 345, or EEE 434
PHY	**361**	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**412**	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 311 with C or better
PHY	**416**	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 315 with C or better
PHY	**420**	Research Paper	Scientific report writing. Culminates in a paper based on library or lab research or both. Taken in conjunction with other courses as approved.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	L	
PHY	**441**	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**452**	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better
PHY	**462**	Subatomic Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**465**	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 334 with C or better
PHY	**466**	Advanced Laboratory III	Continuation of PHY 465. fee	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisite: PHY 465 with C or better
PHY	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**481**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 481 or 511.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**482**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 482 or 512.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 481 with C or better. Students who have credit for PHY 512, or MSE 527, or NAN 512, may not enroll in PHY 482
PHY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Pre-requisites: Must be an Honors student
PHY	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**495**	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**501**	Methods of Computational and Theoretical Physics	Analytic and computational approaches to problems in classical and quantum physics. Topics may include numerical analysis, molecular dynamics, Monte Carlo simulations, density functional theory, high performance computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**502**	Methods of Theoretical Physics	Continuation of PHY 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 and PHY 315; Credit is allowed for only NAN 511, MSE 526, PHY 481 or PHY 511.
PHY	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**521**	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**523**	Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**531**	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**532**	Advanced Topics in Electrodynamics	Electromagnetism of dielectric media, magnetic media, and superconductors; introduction to magnetohydrodynamics, laser physics, and nonlinear optics; additional special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**541**	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
PHY	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	**551**	X-Ray and Electron Diffraction	Fresnel and Fraunhofer diffraction in integral formulation; diffraction of x rays and neutrons by crystal lattices; structures of solids, including crystal structure analysis; theory and techniques of electron microscopy/diffraction of crystalline/noncrystalline specimens.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		If you have credit for MSE 552, or NAN 552, or SEM 552, you may not enroll in PHY 552
PHY	**553**	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**555**	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**561**	Nuclear Physics	Properties of nuclei, conservation laws, internucleon forces, nuclear structure models, reactions and decays, quark model with applications to nuclei.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**562**	Nuclear Physics	Continuation of PHY 561.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**567**	Relativistic Quantum Mechanics and Field Theory	Relativistic quantum mechanics and introduction to the quantum field theory of scalar, spinor, and electromagnetic fields. QED through renormalization theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**568**	Particle Physics Phenomenology	Hadron physics, internal symmetry groups, weak interactions, lepton and quark phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**569**	The Standard Model and Beyond	Introduces and applies the standard model of strong and electroweak interactions. Special topics include recent developments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
PHY	**576**	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**577**	Advanced Quantum Theory	Scattering in three dimensions, second quantization of bosons and fermions, quantization of electromagnetism, addition of angular momenta, electronic structure of atoms and molecules, introduction to relativistic quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**581**	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**582**	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**587**	Quantum Optics	Quantization of the electromagnetic field. Quantum theory of coherence, photon counting, photon states, lasers, density operators, and atomic Raman scattering.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**588**	Quantum Optics	Continuation of PHY 587.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: must have completed PHY 111 with a grade of C or greater, or be currently enrolled in PHY 111
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PLA	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Pre-Landscape Architecture student
PLA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**222**	Computers in Landscape Architecture	Computer applications in landscape architecture including CAD, GIS, graphics, and visualization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	
PLA	**240**	Landscape Survey Techniques	Develops landscape survey skills including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**261**	Landscape Architecture I	Landscape communication: communication techniques for urban planning and landscape architecture. Credit is allowed only for PLA 261 or PUP 261.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		
PLA	**262**	Landscape Architecture II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		
PLA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction. Studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**412**	Landscape Ecology and Planning	Reviews the evolution of landscape ecology and landscape planning and examines use and value.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**413**	Southwest Landscape Interpretation	Explores methods and implications of landscape interpretation within the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
PLA	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems. Lecture, studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**462**	Landscape Arch VI	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student; Must have completed PLA 461 with a grade of C or greater or be currently enrolled
PLA	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12	G	
PLA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
PLA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
PLA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
PLA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**108**	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
PLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**200**	Biology of Plants	Analyzes the structure/function interaction for plant cells and tissues and properties that emerge in whole plants. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SQ	
PLB	**201**	Biology of Plants Laboratory	Lab/field experiments to teach techniques and protocols of the scientific process; reinforces concepts from lecture by asking questions and solving problems. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SQ	
PLB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L or SG	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**302**	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**304**	Biology of Algae and Fungi	Ecology, economics, and evolutionary diversity of the algae and fungi. Traditional and modern biotechnological uses.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**305**	Cacti and Succulents	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181, 182 (or PLB 200 and 201); CHM 116 with C or better
PLB	**306**	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**320**	Environmental Science (Nonmajor)	Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
PLB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	**400**	Lichenology	Chemistry, ecology, physiology, and taxonomy of lichens.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**401**	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in plant biology; requires weekly reflective reading and writing.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**404**	Phycology	Algae (both fresh water and marine forms), emphasizing field collection and identification of local representatives. Morphological, ecological, and economic aspects of the algae. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**407**	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**410**	Angiosperm Taxonomy	Principles underlying angiosperm phylogeny.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: PLB 310 with C or better
PLB	**411**	Trees and Shrubs of Arizona	Identification of woody plants from desert, chaparral, and forest habitats in Arizona. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**416**	Medical Botany	Explores plants affecting human health: modern- and folk-usage medicinal plants. Quality control, clinical evidence, plant chemistry, and ethnopharmacology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**420**	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**421**	Plant Ecology: Communities and Ecosystems	Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystems emphasizing the role of vegetation. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Students who have credit in GPH 422, may not enroll in PLB 422
PLB	**430**	Statistical Analyses in Environmental Science	ANOVAS, 1-way classification of factorial and partially hierarchic designs; introductory multivariate statistics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
PLB	**432**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: C or better in:BIO 187 (or both PLB 200 and PLB 201) and BIO 188
PLB	**434**	Landscape Ecological Analysis and Modeling	Technical methods of landscape ecological analyses. Includes mathematical and statistical examination and modeling of landscape ecological patterns and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**440**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better; Students who have credit in BIO 464, may not enroll in PLB 440
PLB	**444**	Plant Growth and Development	Molecular basis of development, role of signal transduction pathways/gene regulation in control of organ formation, pollination, germination, and growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 353 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors Student
PLB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
PLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
PLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	**502**	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
PLB	**540**	Plant Biochemistry	Structure/function relationships of molecules, emphasizing processes unique to plants: carbon fixation, synthesis of storage products, pigments, and secondary metabolites.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**550**	Plant Molecular Biology	Biochemistry and molecular biology of plant organelles, including protein targeting, plant viruses, and molecular designs for plant improvements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**552**	Plant Genetic Engineering	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**553**	Plant Genetic Engineering Laboratory	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**554**	Plant Biotechnology	Aseptic, clonal propagation of plants and in vitro culture of cells, organs, and tissues.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**558**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	L or SG	Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 187 (or both PLB 200 and PLB 201) with C or better; BIO 188 with C or better
PLC	**101**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**102**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 101 with D or better or currently enrolled
PLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**201**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**202**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 201 with D
PLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	**492**	Honors Directed Study		N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
PLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
PLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
POR	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:POR 101 with a grade of C or better or currenlty enrolled
POR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**313**	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 201 with C or better
POR	**314**	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 313 with C or better
POR	**321**	Luso-Brazilian Literature	Representative masterpieces of Portuguese and Brazilian literature from the beginning to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: POR 313 with C or better
POR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**472**	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites: POR 313 with C or better
POR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
POR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
POR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
POR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.	G	
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**220**	Political Issues and Public Policy	Contemporary social problems and political issues, particularly development of public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L or SB	
POS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	
POS	**270**	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**300**	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**301**	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**305**	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**311**	Arizona Constitution and Government	Constitution and government of the State of Arizona. Credit is allowed for only POS 311 or 316 or 417. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2.		
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**315**	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**316**	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States. Credit is allowed for only POS 316 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**320**	Public Administration	Role of the administrator in the political process with an examination of the basic concepts of bureaucracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**330**	Contemporary Controversies in Domestic Politics	Explores key controversies in domestic politics including the environment, the economy, poverty, gender, race, and security.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**332**	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**333**	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**340**	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**341**	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**355**	Russia and Successor States	Description and analysis of political institutions and practices in Russia and successor states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**356**	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**357**	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**358**	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**359**	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Sahara Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**368**	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**369**	War, Politics, and Society	Relationships between techniques/technology of war and political/social structures in different time periods and locations. Who commands, dies, and pays?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**370**	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**401**	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	CS	Pre-requisite: POS 301
POS	**410**	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**426**	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**431**	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**435**	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**439**	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**442**	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**443**	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**445**	Asian Political Thought	Contemporary political ideas and theories in selected Asian countries, including the impact of Marxist and non-Marxist theories on revolutionary processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**451**	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**452**	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**453**	South America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**455**	Central America and the Caribbean	Governmental institutions, political processes, and developmental problems of the nation-states and dependent areas of Central America and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**459**	South and Southern Africa	Post-apartheid South African government and politics; South Africa and the southern African region; regional security and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**463**	Inter-American Relations	Diplomatic relations among the Latin American states. Development of U.S. foreign policy toward Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**465**	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**467**	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**468**	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**471**	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**472**	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**485**	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS	**501**	Methods of Political Science	Problems of method and knowledge in political science, strategies of political inquiry, and issues in philosophy of social science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**502**	Philosophy of Political Inquiry	Problems of knowledge and method in political science, with attention to both empirical and evaluative analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2-3		
POS	**503**	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**530**	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**545**	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**550**	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**560**	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**563**	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**601**	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**602**	Advanced Survey Research	Presents design and conduct of political surveys, including sampling, instrument design, scaling, and statistical and graphical analysis of survey data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**603**	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**604**	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**606**	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**635**	State Politics and Public Policy	Introduces comparative state policy emphasizing policy or performance differences among the states and the reasons for these differences.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**636**	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**638**	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**651**	Politics of Change and Development	Examines contending approaches to national, social, and political change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**660**	The Modern World System	Theoretically driven, historical analysis of the organization and operation of the international political economy since the 16th century.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**661**	The State	Examines theories of state, state-society relations, and interstate politics emphasizing questions of sovereignty, territoriality, violence, representation, democracy, and change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**662**	International Organization	History, practical political significance, and future of international institutions, transnational regimes, and other approaches to international organization.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**664**	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**665**	foreign Policy Theory	Examines foreign policy theory and methods. Development and critique of research designs analyzing foreign policy processes within and among nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	
POS	**247**	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & G	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**342**	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU or SB	
POS	**343**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**354**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**362**	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems. Credit is allowed for only POS 362 or 160.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Credit is allowed for only POL 360, POS 160 or POL 160.
POS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**430**	Race and Politics in the Americas	Studies racial politics in North, Central, and South America with a focus on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**436**	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**437**	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**438**	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**440**	Political Futures through Science Fiction	Examines the relationship between politics and science fiction literature and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or HU	
POS	**444**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**446**	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**456**	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**460**	Politics of Globalization	Theories and analysis of the politics of economic and technological globalization in the contemporary world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**464**	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**470**	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
POS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**550**	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 550 or 350. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**555**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 555 or 355. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**560**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 560 or 360.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**565**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards. Credit is allowed for only PPE 565 or 365.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**570**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 570 or 370.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**575**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 575 or 375.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**576**	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**585**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields, with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**593**	Applied Project		Y	LEC	Y	CNV	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**210**	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**215**	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**220**	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**225**	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**350**	Physical Education for the Elementary School	Scope and values of physical in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 350 or 550. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Students who have credit for PPE 550, may not enroll in PPE 350
PPE	**355**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 355 or 555. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**360**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 360 or 560.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**365**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**370**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 370 or 570.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**375**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 375 or 575.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**474**	Field Experience in Physical Education	Analyzes course content in an elementary/secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		
PPE	**480**	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
PPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**495**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PRM	**120**	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**150**	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
PRM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**210**	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD, NLM, PRM or TDM 301
PRM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
PRM	**303**	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: NLM 160 or PRM 120 with C or better; MAT 142 with C or better ; ENG 102, 105, or 108 with C or better; Minimum 2.5 GPA
PRM	**304**	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Parks & Rec Mgmt, Rec & Tourism or Nonprofit Leadership & Mgmt student; Minimum 2.50 cumulative GPA; Minimum 45 hours; MAT 142 or better; PRM 210 (or NLM 210, TDM 210) with C or better
PRM	**311**	Leadership in Recreation and Tourism	Leadership theory and strategies applied to recreation and tourism settings, emphasizing group dynamics, motivational processes, and supervisory skills.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have a GPA of 2.0 or greater
PRM	**315**	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM120 (REC120) with C or better
PRM	**320**	Talent and Entertainment Concepts	Provides theory and skill development focused on management, marketing, finances, facilities, equipment, and operations related to coordinating entertainment elements.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 486 (or RTM 486) with C or better
PRM	**321**	Event Protocol, Ethics, and Etiquette	Theoretical and practical focus on the special elements of protocol, ethics, and etiquette as they apply to special events management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**322**	Special Event Programming	Provides a theoretical and practical base related to planning, organization, and coordination of activity elements that comprise the special events program.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**323**	Special Event On-Site Operations	Theory and practical skills focused on security, parking, traffic, waste management, transportation, communication, storage, and other operational issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**324**	Festival Site Design	Provides both a theoretical basis and practical skills focused on how to physically design and lay out a special event.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**325**	Working with Subcontractors and Vendors	Theory and skills focused on equipment rentals, food and beverage vendors, arts and crafts vendors, commercial vendors, and other subcontracted entities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**326**	Sponsorship	Provides theory and practical skills focused on selling, partnership, benefit/assets, and leverage concepts of sponsorship for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PRM	**327**	Creative Event Revenue Production	Provides both theoretical and practical skills focused on earned income and other alternative financing for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**328**	Budgeting and Accounting for Special Events	Focuses on details related to budgeting, accounting, and financial controls used in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**340**	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	FLD	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**355**	Team-Building Strategies	Explores the concepts and strategies for facilitating team building, self-confidence, and positive self-esteem in situations across the lifespan.	N	LEL	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**364**	Foundations of Therapeutic Recreation	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**368**	Sports Management	Introduces concepts of sports management in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**370**	Natural Resource Recreation Planning and Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed 45 or more earned hours
PRM	**380**	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB & H	
PRM	**388**	Business Practices for Special Event Management	Emphasizes personnel, strategic planning, marketing, risk management, legal issues, and professionalism in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**400**	Processes and Techniques in Therapeutic Recreation	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have completed PRM364 or REC364 with a grade of C or greater or be currently enrolled
PRM	**401**	Tourism Management	Principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 210 or PRM 210 with C or better; TDM 301 or PRM 301 with C or better; PRM 303 or TDM 372 with C or better. Students who have credit for TDM 401, may not enroll in PRM 401
PRM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better; Credit is allowed for only NLM 402, PRM 402 or TDM 402
PRM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 303 or TDM 372 with C or better; Students who have credit for TDM 403 or NLM 403 may not enroll in PRM 403
PRM	**406**	Program Design and Evaluation in Therapeutic Recreation	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: PRM 364 (or REC 364) and PRM 400 (or REC 400) with C or better if completed
PRM	**424**	Recreation Program Management	Provides nonmajors with an in-depth look at recreation program management in a variety of settings with diverse groups.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 160 or PRM 120 (REC 120) with C or better or currently enrolled; Not open to Parks & Recreation Management, Recreation (Management concentration) or Nonprofit Leadership & Management majors.
PRM	**450**	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**453**	Volunteer Management in Human Service Organizations	Administration of volunteer service programs. Study and analysis of volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**454**	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PRM	**460**	Assessment and Documentation in Therapeutic Recreation	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 364 (REC 364) and PRM 400 (REC 400) with C or better or currently enrolled
PRM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Parks and Recreation or Recreation (Management concentration) student; PRM 402 (REC 482) and PRM 403 (REC 499 Pre Internship Workshop) with C or better
PRM	**470**	Environmental Interpretation and Education	Introduces park interpretation and environmental education that includes theories, principles, and techniques.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 380 with C or better
PRM	**475**	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or REC 120 with C or better
PRM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	**486**	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
PRM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
PRM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
PRM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned C or better in PSY 290 or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**360**	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisite- Mus have earned C or better in PSY 290 or currently enrolled
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**438**	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**439**	Training and Skill Acquisition	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**440**	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**448**	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**449**	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**477**	Applied Psychology Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-6		
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**560**	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**561**	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**562**	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**563**	Advanced Industrial and Organizational Psychology	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		

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PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Tech & Innovation	Faculty of Applied Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman; 25 or less total earned hours
PSY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**231**	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	CS	Pre-requisites: Barrett Honors student; MAT 119, MAT 170, MAT 242, MAT 251 or higher with C or better; PGS 101 with C or better
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**420**	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 and 320 with C or better
PSY	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed KIN 345 with a grade of C or greater or be currently enrolled
PSY	**424**	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 325 with C or better
PSY	**426**	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must have completed PSY 325 with a grade of C or greater or be currently enrolled
PSY	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for MIC 427, may not enroll in PSY 427
PSY	**434**	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 323 or PSY 324 with C or better
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 325 AND one of the following: BIO 181, 182, 187, 188, 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with a grade of C or greater or be currently enrolled
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**501**	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**506**	Survey of Research in Environmental Psychology	Major topics and paradigms in the study of person-environment relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**512**	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**524**	Advanced Physiological Psychology	Contributions of physiological processes and brain function to fundamental behavioral processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**532**	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**533**	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**534**	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**535**	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**536**	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**537**	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**538**	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**541**	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**542**	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**551**	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**553**	Social Influence	Researches literature relevant to attitude formation and change, conformity, obedience, power, compliance, and altruism and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**555**	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**569**	Advanced Study of Personality	Personality as a theoretical concept in psychology, including definitional problems, behavioral and traditional approaches, the measurement of personality, and current research issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**572**	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**574**	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**576**	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**578**	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**582**	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**624**	Clinical Neuroscience	Examines the biological underpinnings of psychological disorders at the molecular, cellular, and system levels (e.g., schizophrenia, depression, anxiety).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		
PSY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**515**	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Psychology MS student
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 210, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101, PSY 230 and PSY 290 with a C or better or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181, 182, 187, 188, 201 or 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**369**	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY (PGS) 101 with C or better; completed one semester of Biology
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: PSY 325 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have completed PSY 325 AND one of the following: BIO 181, 182, 187, 188, 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with a grade of C or greater or be currently enrolled
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PSY	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: PGS 399 with C or better
PUB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	**501**	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PUB	**502**	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**503**	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**510**	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	DIS	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**580**	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**592**	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**190**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**200**	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**261**	Urban Planning I	Planning communication: communication techniques for urban planning and landscape architecture communication. Credit is allowed only for PUP 261 or PLA 261.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**262**	Urban Planning II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**301**	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
PUP	**361**	Introductory Urban Planning Studio	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills. Fee.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**362**	Urban Planning III	Neighborhood planning: local community plan making; urban development and neighborhood improvement. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Urban Planning undergraduate student; PUP 361 with C or better
PUP	**363**	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Design Studies, Urban Planning or Housing & Urban Develpmnt undergraduate student
PUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**410**	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**412**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for APH 414 or PUP 412 only
PUP	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU	Pre-requisite: PUP 301 with C or better
PUP	**424**	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**425**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Urban Planning BA, Landscape Architecture BSLA, Architectural Studies BSD or Housing & Urban Develpmnt BSD; Students who have credit for PUP 525 may not enroll in PUP 425
PUP	**430**	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**432**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**433**	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Senior student; PUP 301with C or better
PUP	**434**	Urban Land Economics	Interaction between space and economic behavior. Examines the use and value of land through economic theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Urban Planning undergraduate student
PUP	**436**	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**441**	Economic Concepts and Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite:PUP 301 with a grade of C or better
PUP	**442**	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**444**	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Must be one of the following Academic Levels: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**445**	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**452**	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisite: PUP 301 with C or better
PUP	**461**	Urban Planning IV	Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Uban Planning undergraduate student; PUP 362 with C or better
PUP	**462**	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with C or better. 45 hours earned.
PUP	**475**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: PUP 301 with C or better. Students who have credit for PUP 585, may not enroll in PUP 485
PUP	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 credit hours; Credit is allowed for only ASB 490 or PUP 490
PUP	**492**	Honors Directed Study		N	IND	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
PUP	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
PUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**501**	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**510**	Citizen Participation	Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**515**	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**516**	International City Design	Comparative exploration of the physical design and structure of international cities and the social, economic, and cultural forces shaping them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**520**	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**524**	Planning Methods I	Methods for urban planning research. Emphasizes research design, demographic analysis, forecasting, and survey research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**525**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	**526**	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**527**	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**531**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**532**	Advanced Urban Planning Law	Advanced study on selected issues in planning law, such as urban design controls, exclusionary practices, compensable regulation, and tax policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**541**	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**542**	Environmental Administration and Planning	Environmental administration of policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**544**	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**546**	Urban Design Policy	Advanced study of local, state, and federal urban design policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**548**	Planning for Urban Environmental Sustainability	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**550**	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**551**	Sustainable Transportation Planning	Discusses the sustainability aspects of transportation planning. Emphasizes nonmotorized transportation, facilities, and public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisities: Graduate student; Credit is allowed for only GCU 516, SOS 560 or PUP 560
PUP	**561**	Urban Design Studio	Current urban form and urban landscape design problems within the Phoenix-centered region.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**562**	Advanced Theory of Urban Design	Study of urban design practice and underlying social, political, and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**563**	The Politics of Urban Space and Design	Advanced seminar critically examines major intellectual traditions investigating urban form, the production of urban space, and socio-spatial practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**565**	Smart Growth and New Urbanism	History, theory, principles, and practices of smart growth and new urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	**572**	Planning Studio I: Data Inventory and Analysis	Comprehensive planning workshop dealing with real community problems. Focuses on the data gathering and analysis steps of the planning process. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**574**	Planning Studio II: Options and Implementation	Comprehensive planning workshop dealing with real community problems. Focuses on the development of options, plan making, and plan implementation. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**575**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**576**	GIS Studio	GIS as a tool to address large, multifaceted planning problems.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate Liberal Arts student
PUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmntl Planning MUEP student
PUP	**585**	International Field Studies in Planning		N	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Must be graduate student. Students who have credit for PUP 485, may not enroll in PUP 585
PUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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PUP	**622**	Planning Methods II: Quantitative Planning Analysis	Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 524 with C or better
PUP	**642**	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**644**	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
QBA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**221**	Statistical Analysis	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must have completed one of the following courses with a grade of D or greater or be currently enrolled: MAT 119, MAT 211 or MAT 271
QBA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Must be an Honors student
QBA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	**502**	Managerial Decision Analysis	Fundamentals of qualitative and quantitative analysis to aid management decision making in a competitive and uncertain environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA student
QBA	**508**	Product and Service Innovation	Develops strategies for innovation in products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		W.P. Carey Graduate Students only
QBA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	**505**	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**507**	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**512**	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**521**	Assisting the Struggling Adolescent Reader	Familiarizes teachers with literacy interests, practices, methods, strategies, and resources to develop and enhance students' enjoyment of learning with texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis).	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**530**	Research Issues in Literacy	For graduate students interested in research on major issues related to literacy instruction. Seminar activities include reviewing quantitative and qualitative methods and analyzing literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**534**	Literacy in Science and Math		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
RDG	**550**	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556**	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
RDG	**557**	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**581**	Literature-Based Reading Programs		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

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RDG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**596**	Gender, Culture, and Literacies	Influence of gender and culture on written, oral, and post-typographical texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**630**	Research in Literacy	For advanced graduate students interested in applied research problems, literature of literacy instruction, and major issues related to literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Credit is allowed for only EDT 634 or RDG 634
RDG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
RDG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**531**	Language and Literacy I	Instructional strategies for teaching reading using systematic, research-based phonics to aid decoding, vocabulary, comprehension development, writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**532**	Language and Literacy II	Applies literacy strategies including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, and extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**550-W**	Practicum Experiences in Reading	Experience utilizing reading diagnostic and instructional techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556-W**	Assessment Procedures in Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RDG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**301**	Literacy and Instruction in the Content Areas	Required course for all Secondary Education candidates. Introduces theory and instructional strategies for learning from text across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**322**	Language Literacy 1 in Elementary Schools	Instructional strategies for teaching reading using systematic research-based phonics to aid decoding; vocabulary; and comprehension development; writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**323**	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**334**	Children'sLiterature and Elementary School Curriculum	Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	HU	
RDG	**413**	Language Literacy 2 in Elementary Schools	Applies literacy strategies, including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**414**	Teaching Reading and Decoding	Emphasizes teaching reading as part of an integrated classroom curriculum. Includes strategies and skills for teaching decoding (phonics), vocabulary, comprehension, study skills, and content area reading.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**440**	Computer Gaming, Learning, and Literacy	Examines the principles of learning underlying well-designed video and computer games. Addresses the literacies involved in such games.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**481**	Reading Practicum		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
RDG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
RDG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RE	**302**	Life and Letters of Paul		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Supply Chain Management	3.		
RE	**584**	Internship		Y	LEC	Y	CNV	W.P. Carey School of Business	Department of Supply Chain Management	3.		
REA	**300**	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
REA	**331**	Real Estate Finance	Legal, market, and institutional factors related to financing proposed and existing properties. Emphasizes current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student. In addition to individual course prerequisites, nonbusiness students must have at least a 2.50 ASU cumulative GPA, a 2.50 ASU business GPA, and 56 earned semester hours to register for any upper-division business course unless otherwise noted.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
REA	**380**	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	**401**	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**441**	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**456**	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
REA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
REC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**501**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
REC	**502**	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**530**	Recreation and Tourism Service Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**552**	Critical Issues in Recreation and Tourism	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**555**	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**569**	Advanced Tourism Studies	Advanced survey of tourism literature with an emphasis on relevant theories, concepts, and current research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**570**	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**579**	Tourism Analysis	Examines theories and methods that govern tourist behavior and their relevance to destination development, operations, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		

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REC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
REC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
REC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		
REC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
RED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
RED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites:Total Earned Hours must be less than or equal to 75 Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**205**	Living and Dying	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world. Lecture, discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	

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REL	**210**	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**225**	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**230**	Intro to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only JST or REL 230
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
REL	**260**	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**301**	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**307**	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, or 105, or 108 with a grade of C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	**314**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**317**	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**318**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**323**	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**324**	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**326**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**330**	Native American Religious Traditions	Presents world views and religious thought through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**331**	History of Native American Religious Traditions	Role of religion in Native American history, including missionization; religious adaptation; and prophetic, messianic, and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**332**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**343**	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**344**	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**346**	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**350**	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**351**	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	
REL	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**355**	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**356**	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better or currently enrolled
REL	**357**	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L & G	Pre-requisties:ENG 102, (or 105, or 108) with a grade of C or better
REL	**362**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, SGS 366, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or REL 362
REL	**363**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
REL	**365**	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**366**	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**372**	formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**373**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**375**	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	**377**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**379**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**380**	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**382**	Religion, Magic, and Science	Relationship and conflict among religion, magic, and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**383**	Origins, Evolution, and Creation	Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and scientific creationism in American culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**384**	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**385**	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**386**	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
REL	**388**	Religion, Ethics, and International Politics	Explores the religious and ethical dimensions of international politics by examining historical and contemporary ideas, movements, issues, and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
REL	**393**	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**395**	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with C or better
REL	**396**	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**405**	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Religious Studies undergraduate student
REL	**410**	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**427**	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**430**	Mesoamerican Shamanic Cosmographies	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**444**	Religion in Japan	Religion in Japanese history, especially the development of Japanese Buddhism, and religion in the modern transformation of Japan.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**460**	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**461**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only AFS 480, SGS 442 or REL 461
REL	**470**	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**471**	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**480**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	G	
REL	**482**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	**483**	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
REL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**501**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
REL	**502**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**581**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**582**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**585**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**603**	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Phd or Masters student in Religious Studies
REL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**720**	Approaches to North American Religious History	Traces narratives and approaches to imagine and reimagine the "plot" of American religious history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: PhD in Religious Studies student
REL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**300**	Research, Writing, and Thinking in Religion and Applied Ethics	Theoretical and methodological tools to study world religions' beliefs, practices, and communities and their intersections with ethical perspectives on problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C & H	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater or be currently enrolled.
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**490**	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	THE	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
REL	**492**	Honors Directed Study		Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**493**	Honors Thesis		Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C & H	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Minimum CUM GPA of 2.00
ROM	**101**	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**201**	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**313**	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 201
ROM	**314**	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 313
ROM	**411**	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	**412**	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ROM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RTM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
RUS	**101**	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**102**	Elementary Russian	See RUS 101. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**201**	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**202**	Intermediate Russian	See RUS 201. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**211**	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**212**	Basic Russian Conversation	See RUS 211. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**311**	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**312**	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**321**	Foundations of Russian Literature	Literary movements, prose, poetry, and drama from early Kievan writings to 19th-century works of Pushkin, Lermontov, Gogol. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	
RUS	**322**	Great Russian Writers of the 19th Century	Surveys the great age of prerevolutionary Russian prose, including works of Gogol, Turgenev, Dostoevski, Tolstoy, and Chekhov. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**323**	Modern Russian Literature and the Soviet Legacy	See also SLC 323. 20th-century Russian writers: their prose, poetry, drama; problems of the writer in Soviet and post-Soviet society. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
RUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RUS	**411**	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**412**	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**417**	Applied Russian Phonetics	General improvement in the student's language skills through aural/oral training in Russian phonology and an analysis of Russian orthography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites: RUS 102 with C or better
RUS	**420**	Russian Poetry	Development of Russian poetry from its beginnings to the present, including both native and emigre poets. Topics in criticism and the study of poetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**421**	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**423**	Dostoyevsky	Dostoyevsky's major works of fiction, including Crime and Punishment and Brothers Karamazov. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**424**	Tolstoy	Tolstoy's major works, including War and Peace and Anna Karenina. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**425**	Chekhov	Chekhov's major works, representative short stories and major plays, including The Cherry Orchard and Three Sisters. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**430**	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**441**	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
RUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
RUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**495**	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
RUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SAO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	**494**	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**496**	Study Abroad	Courses with the prefix SAO numbered 496 and 596 are reserved for Study Abroad Office study abroad and exchange programs. This is a placeholder course. Students must register for the number of credits equivalent to full-time study here at ASU. For most programs, participating undergraduate students register for 12 semester hours and graduate students register for 9 semester hours. Students participating in an SAO Study Abroad Program must register for the subtopic SAO: Study Abroad Program; participants in an SAO Exchange Program will register for the subtopic SAO: Exchange Program. Following completion of the student's international program, this course will be dropped and will be replaced by the ASU equivalencies of those courses completed on the program. In this way, actual credits and grades earned for particular courses completed on SAO programs will be recorded at ASU.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**596**	Study Abroad	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**598**	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**200**	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**300**	Interdisciplinary Approaches to Social and Behavioral Sciences	Interdisciplinary approach to the study of social life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**301**	Cultural Diversity	Socially structured differences in historical and cross-cultural perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & C	
SBS	**302**	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**303**	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**304**	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	
SBS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SBS	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**351**	Population Geography	Demographic patterns. Spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: must have completed MAT 117,or119, or142, or 170,or 210 with a grade of C or greater; or be currenlty enrolled in one of these
SBS	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		

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SBS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**404**	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: must have completed SBS 303 and SBS 304 with a grade of C or greater.
SBS	**410**	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**430**	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**440**	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**450**	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**460**	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**461**	Program Evaluation and Policy Research	Examines design, data collection/analysis, and political/ethical issues in planning and evaluating social programs and policies in community organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: AJS 302, COM 308, PSY 290, SBS 302 or SBS 303
SBS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SBS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SBS	**490**	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**491**	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SBS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SCM	**300**	Global Supply Operations	Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA; ACC 241 or ACC 271, CIS 105 or CIS 220 or CIS 236, and ECN 221 with a grade of C or greater.
SCM	**301**	Supply Chain Management	Examines the purchasing, materials, and logistics management areas. Presents techniques for acquiring, storing, processing, and moving material inventory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
SCM	**303**	Honors Global Supply Operations	Explores the principles, concepts, and tools of supply chain management, with emphasis on how these are applied in the business world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; ACC 241 or ACC 242 or ACC 271, and ECN 221 or ECN 231 with a grade of C or better
SCM	**345**	Logistics Management	Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisite: W.P. Carey Supply Chain Management BS student; Co- or Pre-requisite: SCM 300 or 303 with a grade of C or better or be currently enrolled or co-enrolled.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCM	**355**	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	**415**	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites:SCM 300 or SCM 303 with a grade of C or better
SCM	**432**	Planning and Control Systems for Supply Chain Management	Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management. fee	N	LAB	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 345 with C or better; Pre/Co-requisite: SCM 355
SCM	**440**	Quality Management/Measurement	Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	**455**	Research and Negotiation	Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 355 with a grade of C or greater
SCM	**463**	Global Supply Chain Management	Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey BS or BA student; Must have completed SCM 300 with a grade of C or greater.
SCM	**479**	Supply Chain Strategy	Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 432 with a grade of C or greater
SCM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Pre-requisites: Must be an Honors student
SCM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite: SCM 300 or SCM 303
SCM	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
SCM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	**502**	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	**511**	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**515**	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**520**	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: SCM 502 with C or better
SCM	**521**	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**532**	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**541**	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**551**	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**581**	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCM	**586**	High-Technology Project Management	Project management processes for high-technology organizations, including planning, scheduling, team development, and control.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**587**	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**588**	Strategic Project Management	Overview of strategic project management processes, project planning and control, project portfolio management, resource allocation, management of strategic project partners.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
SCM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
SCN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
SCN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SCN	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SED	**502**	Equity in Mathematics and Science Education	Introduces equity issues in science and mathematics as they relate to gender, social class, and ethnicity. Examines current research in these areas.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
SED	**522**	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student
SED	**523**	Middle School Curriculum and Organization	Overview of the organization, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**528**	Organizing and Managing the Middle/Secondary Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**529**	Dynamics of Effective Teaching	Explores and applies new research regarding learning, motivation, and retention. Has immediate application and results for classroom teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**530**	Introduction to Middle School Concept, Philosophy, and Curriculum	Overview of the concept, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**533**	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be a graduate student
SED	**544**	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**577**	Issues and Trends in Secondary Education	Analyzes lay and professional reports; problems and issues in American secondary education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**711**	Secondary Curriculum Development	Theories and processes of developing curriculum; evaluation of research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 522 and a Y in SED 478 or SED 578
SED	**722**	Improvement of Instruction in the Secondary School	Evaluates the research; issues and theories related to the improvement of instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 533
SED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**501**	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**520**	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**547**	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**560**	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**561**	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**576**	Field Experience	Applies course content in secondary and middle school science and mathematics classrooms: observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**578**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**579**	Apprentice Teaching in Secondary Education	Apprentice teaching in secondary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
SED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**321**	Critical Issues in Secondary Education	Examines perspectives of critical issues in contemporary education and encourages students to think critically and to develop their own viewpoints.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**322**	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**397**	Field Experience II	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**464**	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**478**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**480**	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**481**	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**482**	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**496**	Field Experience III	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SEM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-3		
SEM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SEM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		If you have credit for PHY 552, or MSE 552, or NAN 552, you may not enroll in SEM 552
SEM	**553**	Electron Microscopy Laboratory I	Lab support for SEM 552.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	1.		
SEM	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**555**	Electron Microscopy Laboratory II	Lab support for SEM 554.	N	LAB	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-12		
SEM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SES	**100**	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SES	**101**	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
SES	**102**	Earth, Solar System, and Universe II	Continuation of SES 101. Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: SES 101 with C or better
SES	**103**	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
SES	**104**	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing. fee	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	**210**	Engineering Systems and Experimental Design	Scientific and engineering design process. Defining scientific problems, generating and evaluating engineering solutions. Computer modeling, technical writing and teaming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 113 or PHY 121 with D or better or currently enrolled; ENG 101, ENG 105 or ENG 107 with D or better or currently enrolled; MAT 265 or MAT 270 with D or better or currently enrolled
SES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**311**	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: MAT 265 or MAT 270; PHY 121 or CHM 113 or BIO 188
SES	**330**	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.		Pre-requisites; PHY 131; PHY132; SES 394 Topic: Concepts of Electrical & Mechanical Engineering Design, with C or better
SES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**410**	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 311
SES	**411**	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SET	**540**	Explosives Surety	Physical and chemical nature of explosives; detonation models; initiating systems; commercial, military, and improvised explosives; investigations; and counter measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**560**	Physical Security I	Systems engineering principles and concepts to guide the design, analysis, and implementation of protection systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**561**	Physical Security II	Scientific theory behind analysis of physical protection systems. Includes probability and statistics, data collection techniques, algorithm processing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**570**	Security System Instrumentation	Operating principles, limitations, and test procedures of security instrumentation and sensors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
SET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
SET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
SGS	**101**	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
SGS	**102**	Thinking Globally: Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**103**	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	

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SGS	**111**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
SGS	**294**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**301**	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
SGS	**303**	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	**304**	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 101 and ENG 102 with a C or better
SGS	**305**	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L	Pre-requisites:Eng 101 (or 107) and Eng 102 (or 105 or 108) with a grade of C or better
SGS	**310**	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites:SGS 101 or SGS 301 and SGS 103 or SGS 303 with C or better
SGS	**311**	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**320**	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**341**	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**343**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & G	
SGS	**344**	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**366**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History), REL 362 or SGS 366
SGS	**381**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G & H	
SGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**441**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**442**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**454**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	May not enroll in SGS 454, if received credit for WST 447, or TCL 447
SGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
SGS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		
SGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**102**	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 101 with C or better; taken within the past two years
SHS	**105**	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SHS	**201**	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 102 with C or better and taken within the past two years
SHS	**202**	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 201 with C or better and taken within the past two years
SHS	**250**	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**310**	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY 101
SHS	**311**	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY101; SHS 105
SHS	**350**	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**367**	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	
SHS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**375**	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310; SHS 311
SHS	**376**	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**401**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 401 or 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311 with D or better; Students who have credit for SHS 501, may not enroll in SHS 401
SHS	**402**	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 250
SHS	**431**	Developmental Speech Disorders	Introduces the nature of articulation, fluency, resonance, and voice disorders in childhood.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**450**	Observation	Opportunity to obtain observation experience at the ASU Speech and Hearing Center or at external sites.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**465**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	Pre-requisites: Credit is allowed for only SSH 465 or 565
SHS	**470**	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**473**	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**483**	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**485**	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310
SHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6	L	Pre-requisites: Must be an Honors student
SHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**496**	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311, 375 and 401 with "D" or better; Students who have credit for SHS 596, may not enroll in SHS 496
SHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-7		
SHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		
SHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		Pre-requisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**501**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 501 or 401.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 401, may not enroll in SHS 501. SHS 311 with C or better
SHS	**502**	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisite: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**504**	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**505**	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**508**	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**510**	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**511**	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**512**	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**513**	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**515**	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**516**	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student

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SHS	**517**	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**518**	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**519**	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**520**	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**521**	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**522**	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**523**	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 502 and SHS 513. SHS majors only
SHS	**524**	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2-3		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**525**	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**545**	Speech Perception by the Hearing Impaired	Focuses on the perception of speech by normal-hearing and hearing-impaired listeners.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**552**	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**555**	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**565**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 465, may not enroll in SHS 565
SHS	**566**	Psychology of Language	Psycholinguistic study of the production and comprehension of language across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**567**	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**570**	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**571**	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**572**	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**573**	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**574**	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**575**	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**576**	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**577**	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**578**	Disorders of Voice	Communication disorders related to dysfunction of the phonatory and resonance systems of voice production, assessment, and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**579**	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**580**	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**581**	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**582**	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**584**	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**585**	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**586**	Language Sampling Methods in Speech-Language Pathology	Focuses on the use of language sampling and analyzes techniques to assess children's language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**587**	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**588**	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**589**	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**596**	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Credit is allowed for only SHS 496 or 596
SHS	**597**	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Must be a graduate student
SHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		

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SHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		
SLC	**150**	Introduction to East Asian Culture	Introduces the cultures of China, Japan, and Korea.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**201**	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU or SB	
SLC	**202**	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**323**	Survey of Literature of the Soviet Era in Translation	Surveys main literary movements, prominent authors, most significant works of prose, poetry, and drama of the Soviet period, 1917-1991.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**385**	Career Development for Language Majors	Theoretical and practical aspects of career planning and development; research focus on language-related careers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 101 or ENG 107 with D or better; ENG 102 or ENG 108 with D or better or currently enrolled
SLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**400**	Linguistics	Introduces the analysis of language and its use in social contexts. Topics: morphology, phonology, pragmatics, semantics, syntax, and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	Pre-requisite: Junior academic level
SLC	**401**	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**415**	Bilingualism and Languages in Contact	Analyzes linguistic aspects of bilingualism, e.g., pidgins and creoles, code-switching, and other contact phenomena; simultaneous/sequential bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better or currently enrolled
SLC	**420**	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**421**	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**440**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
SLC	**450**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200; ENG 200-level literature course, or FMS 100; FMS 200 . Students who have credit for ENG 447 or FMS 442 may not enroll in SLC 450
SLC	**461**	Feminist Political Writing in Contemporary Europe	Examines the discourse of gender-politics in Central Eastern Europe before and after Soviet hegemony.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**464**	Politics of Drama in 20th-Century Europe	Interdisciplinary examination of European drama before and after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	**472**	Literature and Politics in Pre- and Post-Communist Europe	Interdisciplinary examination of the cultures of Eastern Europe from WWI to the present.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**476**	Literature and Film in 20th-Century Eastern Europe	Evaluates literary texts and films as a massive propaganda machine of the totalitarian state.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**479**	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**480**	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**481**	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**482**	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**483**	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**485**	Problems of Literary Translation	Theory and practice with emphasis on application through individual translation projects. May be repeated for a total of 6 semester hours.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 401 with D or better or currently enrolled
SLC	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Honors students only
SLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	**515**	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better
SLC	**525**	Second-Language Acquisition Trends and Issues in Foreign Language Teaching	Advanced methods seminar, designed for experienced teachers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SLC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**304**	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	CS	
SLV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**440**	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	
SLV	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLV	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLV	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**220**	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

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SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(L or SB) & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Students who have credit for CDE 312 may not enroll in SOC 312
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**321**	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**331**	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**333**	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**334**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G & H	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**363**	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**375**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(HU or SB) & C	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	CS	
SOC	**391**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Prerequisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390. Credit is allowed for only FAS 361 or SOC 391
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**415**	The Family	Family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**416**	Marriage Problems in Contemporary Society	Marital and family problems in today's society from the viewpoint of personal and cultural adjustment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**417**	Family Violence	Current research and theories about domestic violence including child maltreatment, spousal aggression, and courtship violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**424**	Women and Health	Women as healthcare workers and issues of health, illness, and healthcare for women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**427**	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**429**	Sociology of Law	Examines law as an institution; its origins, operations, and consequences. Emphasizes contemporary legal issues and problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**433**	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for FAS 435, may not enroll in SOC 435
SOC	**446**	Sociology of Crime	Process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**448**	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**451**	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**474**	African Americans in Modern Society	Social and cultural heritage of black Americans; achievements and current trends.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**483**	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
SOC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**501**	Practicum in Survey Research	Research practicum in survey fieldwork, analysis, and reporting in the Phoenix Area Study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**502**	Practicum in Survey Research	Continuation of SOC 501.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**503**	Academic Professional Development	Becoming and working as an academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**504**	Sociology as a Profession II	Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**505**	Applied Regression Analysis	Multiple linear regression topics relevant to sociological data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**507**	Social Statistics IIA: Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in sociology. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**508**	Social Statistics IIB: Structural Equation Analysis	Structural equation models using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**509**	Social Statistics IIC: Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**512**	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**515**	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**516**	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**519**	Graduate Medical Sociology	Current developments in medical sociology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**523**	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**533**	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**585**	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**588**	Methodological Issues in Sociology	Basic methodological issues in the study of human social life. Emphasizes a limited number of key issues and approaches to research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**210**	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**328**	Migration	Introduces the definition and analysis of migration in all forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
SOC	**353**	Death and Dying in Cross-Cultural Perspective	Humanistic and scientific study of aging, sickness, dying, death, funerals, and grief and their philosophy and ecology in non-Western and Western cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
SOC	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**364**	Popular Culture	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**366**	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**400**	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**419**	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**443**	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**456**	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**457**	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOS	**100**	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		

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SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**111**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	(HU or SB) & G	
SOS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**300**	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Sustainability minor. SOS 100 with C or better; 6 hours from two Sustainability themes
SOS	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**320**	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	L or SB	Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**321**	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**322**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**323**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better; Credit for SOS 323 or SOS 465 or PUP 465 only
SOS	**324**	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better
SOS	**325**	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**326**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	SB	
SOS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	School of Sustainability	School of Sustainability	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SSH 414, may not enroll in SOS 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SOS	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in BIO 424 or ASM 424, may not enroll in SOS 424

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SOS	**430**	Sustainable Economic Development and Social Transformation	A clustered learning network on the application of sustainability principles to the evaluation of economic development strategies at the national, regional, and local levels, using case studies. May be repeated once for credit.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**431**	Resilience and Sustainability	A clustered learning network on the application of resilience analysis to the evaluation and management of the sustainability of coupled social-ecological systems using case studies. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**433**	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with a C or better. 45 hours earned. Sustainability Majors, credit allowed only for SOS 323 or SOS 465
SOS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**492**	Honors Directed Study		Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		
SOS	**493**	Honors Thesis		N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Pre-requisites: Must be an Honors student
SOS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**499**	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	**510**	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**511**	Methodology of Sustainability Research and Problem Solving	Provides a sense of when, where, and how quantitative methods are used in studying questions related to sustainability; a road map for furthering quantitative skill sets; and opportunities to refresh and build some basic mathematical skills from selected topics in differential and integral calculus, linear algebra, and probability and statistics that will be required for further study.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**512**	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**513**	Science for Sustainability	Carbon cycle, nutrient cycles, carbon and nutrients in the oceans, climate change, oxygen and ozone, solid waste pollution, urban air pollution.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**515**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**516**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 516 if you have credit in GLG 547, or PAF 547, or BIO 515
SOS	**530**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale. Credit is allowed for only SOS 530 or SOS 322.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**532**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:May not enroll in SOS 532, if credit received for ASB 533

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	**533**	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**534**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**535**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**536**	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Studentso choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**540**	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to enable them to understand and critique empirical research papers and to conduct their own basic quantitative analysis. Exposes students to applications of statistical methods in the literature to foster an understanding for how statistical and econometric tools are utilized in the research community and to develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations, and command of statistical tools that constitute quality empirical research. Class sessions primarily focus on the development of the necessary theoretical "toolbox"; practical skills in the use of a statistical software package and in interpreting its output are fostered through problem sets.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**550**	Introduction to Sustainability and Organizational Strategies	Focuses on organizational strategies for technology companies competing in a global environment. Strategic and tactical decision implications of a life cycle value proposition; modeling and analysis for strategic decisions about product/service bundles and delivery mechanisms; innovation; technology, including the linkages to the firm strategy and empirical evidence; supply, demand, and value chain; research of laws, guidelines and international agreements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**551**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 551 if you have credit in CEE 544
SOS	**552**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Students who have credit for CEE 581, may not enroll for SOS 552
SOS	**559**	Sustainable Technology and Management Capstone	Provides opportunity to demonstrate comprehension of the fundamental aspects that have been introduced in the classroom and the synthesis of these fundamental aspects into a demonstrable project that can be presented and defended.	N	STO	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SP	**431**	Prose of Golden Age		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Must be a freshmanwith 25 or less total earned hours
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**203**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not enroll in SPA 203 if they have received a D or better in SPA201,202,204,311,312,313,314,315,316,325,412
SPA	**204**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 204 or SPA 202, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	May not enroll in SPA 313 if received a D or better in SPA 314,315, 316,325,412
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412
SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412
SPA	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: SPA 314 or 316
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**400**	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre/co-requisite: SPA 413; Credit is allowed for only SPA 400 or SPA 539
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**417**	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SPA 412 with a grade of D or better, or in progress
SPA	**418**	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 413 with C or better
SPA	**420**	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413 with D or better
SPA	**421**	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or SB) & C	Pre-requisites: SPA 412 with C or better
SPA	**422**	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 412
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325

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SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L & G	Pre-requisite: SPA 325
SPA	**429**	Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuilxóchitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**431**	Prose of Golden Age		N	LEC	N	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**434**	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderón de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**435**	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**454**	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**456**	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**471**	Civilization of the Spanish Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & C	Pre-requisites: SPA 314 or 316
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**473**	Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & G	Pre-requisties:SPA 314 or 316 with a grade of D or better or currently enrolled
SPA	**474**	Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**485**	Mexican American Short Story	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325
SPA	**486**	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**487**	Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
SPA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**534**	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**536**	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**537**	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**538**	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**539**	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**540**	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**541**	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**542**	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**543**	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**544**	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**545**	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**547**	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 400 or SPA 539
SPA	**552**	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marín, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**555**	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**557**	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**560**	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**561**	Golden Age Spanish Prose Fiction	Major figures and works of the 16th and 17th centuries, with emphasis on the picaresque novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**562**	Golden Age Spanish Poetry	Major figures and works of the 16th and 17th centuries, with emphasis on lyric poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**563**	Spanish Romanticism	Principal figures and works of Spanish romanticism, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**564**	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**565**	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**566**	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**567**	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**568**	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**569**	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**570**	Indigenous Literatures of Spanish America	Indigenous literary traditions, with emphasis on Nahuatl, Mayan, and Quechua literatures through readings in Spanish translations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**571**	Colonial Spanish American Literature	Major figures and works from conquest to independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**572**	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**573**	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**574**	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**575**	Contemporary Spanish American Novel	Principal novels of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**576**	Contemporary Spanish American Short Story	Principal short stories of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**577**	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**578**	Novel of the Mexican Revolution	Representative works and authors of this genre (Guzmán, Azuela, Urquizo, Muñoz, and Romero), including related or peripheral offshoots in indigenous novels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**581**	Latin American Popular Culture	Studies in selected topics of Latin American popular culture, with emphasis on appropriate academic models for the critical analysis of these materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**582**	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**585**	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlica, Suárez, Ulibarrí, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**586**	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**587**	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory an other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**588**	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**589**	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SPA	**601**	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**791**	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.	G	
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: Must have completed SPA 202 with a grade of C or greater.
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412

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SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L & G	Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412

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SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPE	**316**	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
SPE	**511**	The Exceptional Child	Educational needs of exceptional children and adults. Not recommended for students who have completed SPE 311.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**512**	Individuals with Mental Retardation	Etiology, diagnosis, and management of individuals with mental retardation. Current trends in prevention, programming, and teacher preparation. Not recommended for students who have completed SPE 312.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**514**	Bilingual/Multicultural Aspects of Special Education	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**519**	Inclusion Methods: Science, Social Studies, and Mathematics	Instructional strategies used for delivery of science, social studies, and mathematics with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**521**	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**524**	Effective Classroom Behavior Management	Organization and delivery of instruction including formative evaluation and techniques of academic behavior management for exceptional children. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**525**	Social Behavior Interventions	Analysis and intervention into social behavior problems of exceptional students. Focuses on strategies to change maladaptive social behavior. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**531**	Methods of Applied Behavior Analysis for Exceptional Populations	Behavior management approaches for classroom behavior of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**536**	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**537**	Instructional Management: Reading and Language Arts	Instructional strategies used for delivery of reading and language arts with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPE	**548**	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**550**	Inclusion Practices in Science and Mathematics	Facilitates and expands knowledge in the practical application of strategies meeting diverse needs of learners in science and mathematics classrooms	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**551**	Teaching Young Children with Special Needs	Methods, materials, and curriculum for preschool and primary-aged children with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**553**	Developmental/Functional Assessment	Teacher-focused developmental/functional assessment of preschool and severely, physically, and multiply handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Graduate student
SPE	**561**	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**566**	Applied Behavior Analysis in Inclusive Settings	Definitions, characteristics, assumptions, and basic principles of behavioral analysis as applied to social skills in inclusion settings.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**574**	Educational Evaluation of Exceptional Children	Design and statistical considerations of normative and criterion-referenced tests. Collection, recording, and analysis of data from formative evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**575**	Survey and Current Issues for Children with Special Needs	Mainstreaming, noncategorical, financing, legal diagnostic, labeling, legislative, and other critical and controversial issues related to the education of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**577**	Inclusive Teaching and Learning	Develops successful learning environments for students using evidence-based instructional approaches, collaborative teaching models, and culturally responsive practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**582**	Research and Evaluation in Special Education	Introduces interpreting research. Specific research techniques with primary emphasis on classroom research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**585**	Creativity: Research and Development	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**586**	Advising the Gifted Child	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**587**	Controversies in Educating the Gifted	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**588**	The Gifted Child	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**589**	Methods in Teaching the Gifted	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be graduatie student in Special Education
SPE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be a graduate student in Special Education
SPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate students only
SPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be a graduate student in Special Education
SPE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Must be a graduate student in Special Education
SPE	**702**	Conducting Research with Special Populations	Considers concepts and methodologies for conducting research with any aspect of special education, including gifted and multicultural.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Must be Graduate(doctoral) student in Special Education
SPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite:Must be a graduate student (doctoral) in Special Education
SPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be a grad(doctoral) student in Special Education
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**532**	Systems, Policies, and Program Practices	Analyzes historical, political, social, and legal factors impacting special education services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**533**	Issues and Foundations in Special Education	Foundational themes and issues in special education. Critical issues related to characteristics of students with mild emotional disturbance, behavior disorders, learning disabilities, mental retardation, orthopedic, and other health impairments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**534**	Assessment and Evaluation for Children with Special Needs	Discusses assessment practices related to student eligibility and program planning. Emphasizes authentic, individualized, interdisciplinary practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**535**	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**540**	Family Centered Practices	Issues associated with families and family systems. Effects of disabilities on families. Strategies for family support and empowerment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**541**	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**544**	Assessment and Evaluation of Infants and Young Children	Developmental assessment and related program planning for infants and young children. Emphasizes authentic, individualized, family-centered and culturally competent approaches.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children with diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**555**	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**578**	Student Teaching in Special Education	Y grade only. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**579**	Apprentice Teaching in Special Education	Apprentice teaching in special education setting. Must be taken four times for a total of 12 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**222**	Orientation to Education of Exceptional Children	Includes gifted, mildly handicapped, severely handicapped, and the bilingual/multicultural exceptional child.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB & C	
SPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SPE	**310**	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**312**	Mental Retardation	Characteristics and assessment specific to mental retardation. Emphasizes terminology, development, educational programming, and therapeutic procedures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**314**	Introduction to Bilingual/Multicultural Special Education	Theoretical background and practical application of general issues regarding the education of bilingual/multicultural handicapped children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**317**	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**318**	Family-School Collaboration	Explores relationships between families of children with special needs and professionals in educational institutions and community agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**320**	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**322**	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**336**	Behavioral and Emotional Problems in Children	Characteristics and assessment specific to emotionally and behaviorally disturbed children. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**361**	Introduction to Learning Disabilities	Characteristics and assessment specific to learning disabilities. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**396**	Field Experience I	Applies course content while working with students with disabilities in inclusive settings. Emphasizes classroom and behavior management. Fee.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**397**	Field Experience II	Applies course content in a special education setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**411**	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**412**	Evaluating Exceptional Children	Normative and criterion-referenced diagnostic techniques, including formative evaluation. Emphasizes application. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**413**	Methods in Language, Reading, and Mathematics for Exceptional Children	Methods, techniques, and materials for use in prescriptive teaching. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**414**	Instructional Management and Strategies: Reading and Writing	Organization and delivery of instruction, including formative evaluation techniques. Instructional techniques of reading and writing. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**415**	Classroom and Behavior Management	Analysis and intervention into social behavior problems of exceptional populations. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**416**	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators. May be repeated for credit.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**417**	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**419**	Instruction in Content Areas: Science and Social Studies	Develops and implements instructional methods and learning strategies for students with special needs related to science and social studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**423**	Technology & Instructional Methods in Language, Reading, & Mathematics for Special Needs students	Technology and instructional methods in language, reading, and mathematics for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**424**	Methods of Cross-Categorical Special Education	Assessment and instructional methods for students with mild to moderate retardation, learning disability, emotional disabilities, and physical/health impairment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**431**	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**440**	Professional Seminar in Special Education	Examines critical issues in the delivery of special education services. Emphasizes self reflection and professional development.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Student teaching in special education setting.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Y grade only. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		
SPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Must be an Honors student
SPE	**493**	Honors Thesis		N	THE	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**496**	Field Experience III	Applies course content in a special education setting. Emphasizes observation pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**576**	Field Experience	Applies course content in special education classrooms: observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Prerequisite(s): Valid copy of AZ DPS fingerprint card on file at ASU; MEd in Special Education major
SPF	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**301**	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L	Pre-requisites: completion of first year composition
SPF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**401**	Teachers and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**402**	Teachers and the Law in Indigenous Communities	Examines the legal rights of students, teachers, and the district while preventing injury to students in indigenous communities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
SPF	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
SPF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
SPF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**501**	Culture and Schooling	Introduces social science concepts of culture and the cultural milieu in which schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**510**	Intro to Organization and Administration of American Public Schools	Curricular practices used in inclusion classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**511**	School and Society	Interrelationship of school and society and the role of education in social change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**515**	Gender and Education	Methods and materials for remediating the basic academic problems of exceptional children. Prerequisite: admission to MEd in Special Education program.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**520**	Cultural Diversity in Education	Philosophic and sociological investigation of cultural diversity in the United States and how it relates to education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**530**	Sociology of Education	Current issues in the sociology of education: stratification, social mobility.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**534**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 534 or 634.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**544**	Philosophical Foundations of Education	Theories of education in ancient, medieval, and modern classical and contemporary philosophies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**597**	Teacher and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science and the law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**603**	Visual Ethnography in Education	Advanced qualitative methods class combining ethnography with the use of video and still photography in data gathering and presentation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**612**	Evaluation Theory	Explores the major theories of evaluation (inquiry leading to value judgments) in educational policy through examination of cases.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**622**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**634**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 634 or 534.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		
SPF	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**711**	Social and Historical Foundations of Education	Explores the history of sociological thought, especially theories of the relations between educational systems and the social/cultural world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
SSH	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111. Students who have credit for ASB 200, may not enroll in SSH 200
SSH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better. If you have credit in ASB 301,or HST 301 you may not enroll in SSH 301
SSH	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: Students who have credit for ASB 355, may not enroll in SSH 355
SSH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**400**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	Pre-requisites: ASB 100 (or SSH 100) or ASB 102 with D or better
SSH	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 or ASM 104 with D or better or currently enrolled; SSH 100 with D or better or currently enrolled
SSH	**402**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better or currently enrolled. If you have credit in ASB 452, you may not sign up for SSH 402
SSH	**403**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for ASB 443, you may not enroll in SSH 403
SSH	**404**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
SSH	**405**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

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SSH	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SOS 414, may not enroll in SSH 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SSH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**493**	Honors Thesis		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	**502**	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: SSH 510 or ASB 510 completed with D or better or currently enrolled
SSH	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511 with D or better. Must be graduate student
SSH	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 500 completed with D or better or currently enrolled; SSH 511 or ASB 511 completed with D or better or currently enrolled
SSH	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
SSH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
STM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
STM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
STP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**231**	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Prerequisites: MAT 117 or 142 with C or better
STP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 210 or 251 or 265 or 270 with C or better
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**425**	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	**427**	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: STP 421 with C or better
STP	**429**	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: STP 420 with C or better
STP	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
STP	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	**525**	Advanced Probability	Measure-theoretic foundations of probability, distribution functions and characteristic functions, laws of large numbers and central limit theorems, conditional probabilities, martingales, and topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**526**	Theory of Statistical Linear Models	Multinormal distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**527**	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**530**	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**531**	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**532**	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**533**	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**534**	Applied Discrete Data Analysis	Models for discrete and count data, measures of association, and log-linear and regression models for contingency tables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**535**	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**300**	Introduction to Probability	Probability models and computations, joint and conditional distributions, moments, families of distribution, stochastic processes, simulation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT210 with a grade of C or greater or be currently enrolled.
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
STP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STS	**101**	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**110**	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**301**	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**302**	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: ENG 101, ENG 105, ENG 107 or ENG 111 with C or better
STS	**303**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STS	**304**	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**305**	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**306**	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**317**	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**318**	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**325**	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**328**	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**329**	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**330**	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**331**	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**332**	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**364**	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites:STS 101 and STS 301 with a grade of D or better
STS	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**401**	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:Completed STS 301 with a grade of D or better
STS	**425**	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
STS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
STS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	**501**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**502**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**503**	Development of Families in Oppressive Context	Addresses the development of healthy families and children. Explores essential tasks of human development and theories that inform practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be admitted to MSW.
SWG	**504**	Theories of Human Behavior	Addresses development of healthy adults and human behavior in groups, organizations, and communities.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; SWG 503 with a C or better or currently enrolled
SWG	**510**	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	**511**	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better
SWG	**512**	Values and Ethics of Social Work Practice I	Develops a basic understanding of diverse ethical systems and their application to a broad range of human problems in various social and cultural contexts.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student
SWG	**513**	Social Work Generalist Practice II	Building on SWG 512, continues to develop and apply a generalist framework of social work practice. Examines theories of practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be admitted to the MSW and have completed SWG 512 with a grade of C or greater
SWG	**519**	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**520**	Research and Advocacy	Develops knowledge and skills needed to utilize and engage in social research related to advocacy issues and the evaluation of social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**531**	Social Policy and Services I	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral of Social Work student
SWG	**532**	Policy and Social Change	Overview of the history, development, pertinent concepts, skills, and definitions associated with social welfare problems and policies.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**533**	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student.
SWG	**534**	Diversity and Underserved Populations	Examines issues of privilege and oppression, including their impact on the social work process, with the goal of developing a culturally competent master's-level social worker.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**540**	The Professional Experience I	150 clock hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; Co-requisite: SWG 512
SWG	**541**	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Master or Doctor Social Work student; Pre or Co-requisite: SWG 510 with a grade of C or greater if completed
SWG	**542**	Field Practicum II	See SWG 541. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG510, SWG541, and SWG 511 with a C or greater or be currently enrolled (or be enrolling in SWG511)
SWG	**543**	The Professional Experience II	250 hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: Master of Social Work student; SWG 512 with C or better; Co-requisite: SWG 513
SWG	**550**	Co-Occurring Disorders	Provides sound theoretical and practical orientations to working with persons who have co-occurring disorders.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**551**	Crisis Intervention	Covers the basics of crisis intervention in social work practice, along with applications to several different populations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**552**	Issues in School Social Work	Provides knowledge and skills necessary to implement effective social work services in a school setting.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**553**	Social Work with American Indians	Introduces social work issues relevant to Native Americans. Explores effective methods with Native American clients.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**554**	Substance Abuse	Psychological and sociocultural determinants of substance abuse. Overview of social policies and treatment approaches.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**555**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWG 555 or SWU 455.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**557**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 557 or SWG 457.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**585**	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student
SWG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisite: Master or Doctor Social Work student.
SWG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-12		
SWG	**600**	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	**603**	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 502; SWG 511; SWG 542
SWG	**604**	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 603
SWG	**606**	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 502 with C or better
SWG	**608**	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 502; SWG 511; SWG 542
SWG	**609**	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 608 compeleted with D or better or currently enrolled
SWG	**610**	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW or MSW Adv Standing student; Co-Requisite: SWG 693 and 645
SWG	**611**	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	College of Public Programs	School of Social Work	2-3		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 510 completed with C or better; SWG 511 completed with C or better or currently enrolled; SWG 541 and SWG 542 completed with Y or currently enrolled
SWG	**612**	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**613**	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 603
SWG	**614**	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600- level SWG courses.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**615**	Effective Intervention with Children and Adolescents	Provides a framework of knowledge, theories, and skills for effective social work practice with vulnerable children and adolescents.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing
SWG	**616**	Social Work with Chemically Dependent Families	Examines dynamics of the chemically dependent family and presents clinical approaches for intervening in the family system and subsystems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**617**	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**618**	Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**619**	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG519 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	**621**	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 611 completed with a C or better or currently enrolled; SWG 641 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or better if completed
SWG	**623**	Agency and Community-Based Research in Social Work	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Soc Wrk student; SWG 519 or 520 completed with C or greater or currently enrolled; Pre or Co-requisite: SWG 680 with C or greater if completed, or currently enrolled.
SWG	**626**	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing; AND completed SWG 610 with a C or greater
SWG	**630**	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**631**	Advanced Policy Analysis	Supports advanced generalist practice with emphasis on policy analysis and philosophy and politics of resource allocation and social welfare.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either: MSW or MSW Adv Standing
SWG	**632**	Social Policy and Services II	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG531 with a grade of C or greater or be currently enrolled
SWG	**633**	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 542 completed with a Y or currently enrolled
SWG	**641**	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal. fee	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or better or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 611 (with a C or better if completed)
SWG	**642**	Advanced Practicum: Direct Practice II	See SWG 641. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work; SWG 511 & SWG 611 with a C or greater or be currently enrolled; SWG 542 & SWG 641with a Y or be currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or greater if completed
SWG	**643**	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or greater or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 681 or SWG 682 with a C or greater if completed
SWG	**644**	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 511 with C or bettter; SWG 542/643 with a Y grade; SWG 681 or 682 with a C or better; Pre/Co-requisite:SWG 680 with C or better
SWG	**645**	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student; SWG 542 with a grade of Y OR MSW Advanced Standing student; co-enrolled in SWG 610 and SWG 693
SWG	**646**	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either the Standard MSW or MSW Adv Standing; completed SWG 645 with a grade of Y; AND be co-enrolled in SWG 614, and SWG 693
SWG	**650**	Social Work Ethics/Law		N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**653**	Theory and Practice of Family Therapy	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either: MSW or MSW Adv Standing.
SWG	**653**	Introduction to Holistic Therapies	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**654**	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**655**	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**656**	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be a graduate student
SWG	**657**	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Aryuvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**660**	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 681 or SWG 682 completed with a C or greater or currently enrolled; Pre or Co-requisite: SWG 623 with C or greater if completed
SWG	**681**	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater

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SWG	**682**	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**685**	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requistes: SWG 681, 682; Co requisite, SWG 523
SWG	**686**	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisites:Must be a student in either: MSW or MSW Adv Standing
SWG	**697**	Special Topics in Working with Diverse Groups	Provides practice strategies for clients of specific marginalized groups; addresses access to resources; describes the larger political context and policy issues that impact the particular group.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	3.		
SWG	**700**	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**720**	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		
SWG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	**171**	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & H	
SWU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		

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SWU	**250**	Stress Management Tools	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	
SWU	**291**	Social Service Delivery Systems	Introduces federal and state social service delivery systems as well as private social service agencies. Explores purpose and structure of community resources. During the semester, students must complete 40 hours of service learning in a social agency.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 with a D or better or currently enrolled; Pre or Co-requisites: SWU 171 or SWU 271 (with a C or better if completed)
SWU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**295**	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & C	Pre-requisites: PGS 101, SOC 101 or SOC 301 with D or better; Pre or Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	**302**	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credidt.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**303**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	L or SB	Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 completed with a D or greater or currently enrolled; Pre or Co-requisites: SWU 171, SWU 291 and SWU 295 (with a C or better if completed)
SWU	**310**	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	**320**	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: student must have completed SWU310 with a grade of C or greater or be currently enrolled or enrolling during the same term
SWU	**321**	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	**331**	Social Policy and Services I	History, philosophy, and values of social welfare; function and role of social welfare in society; development of the social work profession and practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	H	Pre-requisites: must be a Social Work student and have completed the following with a C or greater or be currently enrolled: ECN 111 or 211, POL 110 or POL 310 or POS 110 or POS 310, SWU 171 or SWU 271, and SWU 291.
SWU	**332**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: student must have completed SWU310 with a grade of C or greater or be currently enrolled/enrolling AND must have completed ECN111 with a grade of D or greater or be currently enrolled
SWU	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**340**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 (SWU 301) with C or better; Pre or Co-requisite: SWU 310 (with C or better if completed)
SWU	**374**	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre/Co-requisite: SWU 310 with C or better if completed
SWU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	**402**	Human Behavior in the Social Environment II	Sequel completing study of life span development and behavior which forms base for social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 with C or better
SWU	**410**	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work undergraduate; SWU310 with C or better; PHI 101, 105 or 306 with D or better; Co-requisites: SWU 412 and SWU 413
SWU	**411**	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU414 and SWU415 AND must be a Social Work major or must have completed SWU410, SWU412, or SWU413 with a grade of C or greater or be currently enrolled
SWU	**412**	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only. fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU413; must have completed SWU310 with C or better; Must be a Social Work major
SWU	**413**	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU412; must have completed SWU 310 with C or better; Must be a Social Work major
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only. fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: must be co-enrolled in SWU 411and 415, and completed SWU 410 and SWU 413 with a grade of C or greater or be currently enrolled.
SWU	**415**	Field Instruction Seminar II	Field-focused seminar, including practice evaluation. 1.5 hours a week.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1.		Pre-requisites: must be co-enrolled in SWU 411 and 414, and have completed the following with a grade of C or greater or be currently enrolled: SWU 410, SWU 412, and SWU 413.
SWU	**415**	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414

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SWU	**420**	Practice-Oriented Research	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**432**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 310 with C or better; ECN 111 or ECN 211 with D or better; POS 110 or 310 with D or better; Co-requisites: SWU 410, SWU 412, and SWU 413
SWU	**442**	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**444**	Issues in School Social Work	Demonstrates how community, family, and school are interdependent using an ecological metaphor, and introduces school social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**455**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWU 455 or SWG 555.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**457**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 457 or SWG 557.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**474**	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre-requisite: must have completed SWU 310 with a grade of C or greater or be currently enrolled
SWU	**492**	Honors Directed Study		N	RSC	N	OPT	College of Public Programs	School of Social Work	1-6		
SWU	**493**	Honors Thesis		N	IND	N	Z1	College of Public Programs	School of Social Work	1-6	L	Pre-requisite: must be an honor student
SWU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-7		
SWU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TA	**488**	Elem Air Transport		Y	LEC	Y	CNV	Ira A. Fulton Engineering	INACTIVE - Dept Aeronautical Management Technology	3.		
TCL	**101**	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**111**	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**201**	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**202**	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**211**	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**220**	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**303**	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		

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TCL	**304**	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**305**	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre or Co-requisites: TCL 303 and TCL 304 with a D or better if completed
TCL	**310**	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**314**	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & H & C	
TCL	**315**	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	
TCL	**321**	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**323**	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4.	SB & C	
TCL	**326**	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**327**	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**328**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
TCL	**340**	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**341**	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**342**	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**350**	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C & G	
TCL	**351**	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for ENG 363, you may not enroll in TCL 363. Completed ENG 101, or ENG 107, or ENG 105 with a D or better or be currently enrolled
TCL	**364**	Transborder Chicana/o and Mexican Literature of Southwest North America Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	Pre-requisites: SPA 314 or 316 with C or better
TCL	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	
TCL	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
TCL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**410**	Race, Medicine, and the Body	The ways in which medicine, disease, and health outcomes are affected by culture, gender, and social location.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L	

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TCL	**422**	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: TCL 321 with C or better
TCL	**424**	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: TCL 321 with C or better
TCL	**443**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	
TCL	**444**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for ASB 464, may not enroll in TCL 444
TCL	**445**	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Uses a transregional and transborder approach, focusing on the interconnections of this modern genre across the borders of Spanish América. Takes a long historical view of the genre by reading representative stories of important literary movements and the aesthetic and cultural values they promoted and fostered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L or HU	
TCL	**446**	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic ¿minority¿ groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or ¿nuyoricans¿)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & G	Pre-requisites: May not enroll in TCL 447, if credit received in WST 447 or SGS 454
TCL	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
TCL	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Pre-requisites: ENG 102, 105, or ENG 108 with a grade of C or better. May not enroll in TCL 465 if received credit for FMS 465
TCL	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	Pre-requisites: ENG 102, 105 or 108 completed with a C or better; You may not enroll in TCL 470 if you have credit for FMS 470
TCL	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	**485**	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**488**	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples¿ experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		
TCL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Pre-requisites: Must be an Honors student
TCL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TDM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
TDM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**205**	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 with C or better if completed; Credit is allowed for only NLM, TDM or PRM 210
TDM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: PRM 120 or NLM 160) with C or better if completed; Credit is allowed for only NLM, PRM or TDM 301
TDM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre-or Co-requisites: PRM 120 (or REC 120) with a C or better if completed
TDM	**325**	Tourism Accommodations	Local, national, and international overview of the lodging and food service industries.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: RTM 373 or TDM 205 with C or better
TDM	**345**	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**350**	Tourism Marketing	Critical examination of marketing principles; applications to travel, tourism, and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better; Minimum 45 hours
TDM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**372**	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	**386**	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	**401**	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Prerequisite: TDM 210 or PRM 210 with C or better; and TDM 301 or PRM 301 with C or better; and PRM 303 or TDM 372 with a C or better. Students who have credit for PRM 401, may not enroll in TDM 401
TDM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better. Students who have credit for PRM 402, or NLM 402, may not enroll in TDM 402
TDM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303 or TDM 372 with C or better Students who have credit for NLM 403 or PRM 403, may not enroll in TDM 403
TDM	**415**	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**448**	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 with C or better
TDM	**458**	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Prerequisites: TDM 402 (or REC 482) and TDM 403 (or REC 499 Pre Internship Workshop) with a C or better or currently enrolled; Must be a Tourism Development and Management or Recreation (Tourism concentration) student
TDM	**480**	Nature-Based Tourism	Examines the interaction of tourism with culture, natural environment, as well as the impacts of tourism on the environment.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or TDM 205 with a D or better, or RTM 373 with C or better
TDM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
TDM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
TDM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
TEL	**501**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**683**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
TEL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**702**	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**703**	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**711**	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**712**	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action researc, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**713**	Applied Mixed Methods of Inquiry	Data collection, analysis, interpretation in studies combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**795**	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**111**	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
TEL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**212**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
TEL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**311**	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**313**	Educational Technology in the K-12 Curriculum	Applies and integrates educational technologies in all curricular areas; examines theoretical and practical issues for diverse learners. Fee.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**314**	Classroom Assessment	Assessment and evaluation of student leaning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**315**	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L or SB	
TEL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
TEL	**492**	Honors Directed Study		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**493**	Honors Thesis		Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
THA	**101**	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
THA	**102**	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:THA 101 with a grade of C or better
THA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**201**	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 102 with C or better
THA	**202**	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 201 with a grade of C or better or currently enrolled
THA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THE	**307**	Acting:		N	LEC	N	CNV	Herberger College of the Arts	School of Theatre and Film	3.		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	**125**	Orientation to Theatre and Film	Orientation to university and school resources and procedures. Career planning and guidance. Community-building exercises. Attendance and written response to performance and media events. Required for BA Theatre and BA Film (film and media production concentration) majors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Theatre and Film students only
THE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**220**	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	L or HU	Pre-requisites: Herberger Institute students in specific majors; THE 125 with B- or better; ENG 101, ENG 105 or ENG 107 with C or better
THE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**301**	Film: the Creative Process II	Advanced study of contemporary cinema history and film techniques; analyzes social changes in film, multicultural filmmaking, and the star system.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed FMP201or THE300 with a D or greater or be currently enrolled
THE	**320**	History of the Theatre I	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites:Must have completed THE220 with a C or greater or be currently enrolled
THE	**321**	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must have completed THE220 and THE320 with a C or greater or be currently enrolled
THE	**322**	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must NOT be a Theatre student
THE	**325**	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Must be a Theatre student
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**403**	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**404**	Foreign Films and Filmmakers	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	G	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**405**	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors. May be repeated for credit when topics vary. Fee (hybrid/Internet).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**406**	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & C	Prerequistes: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**421**	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Pre-requisites:ENG 102(or Eng 105, or 108) with a grade of D or better, or currently enrolled
THE	**422**	Latina and Latino Theatre	Readings, discussion, video of dramatic literature and production styles of Latina and Latino playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with a C or greater or currently enrolled OR Theatre Masters students
THE	**423**	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prequisites: Must be a Masters student , or must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled
THE	**424**	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**426**	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prequisites: Must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled OR be a Masters Theatre student
THE	**430**	History of Costume: Western Tradition	Studies major costume styles throughout history of Western civilization and how these fashions reflected society. Explores how styles can be used by theatrical costumers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**440**	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre undergraduate student; THE 220 and THE 320 with C or better
THE	**480**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Junior standing and above. Students who have credit for THE 581, may not enroll in THE 480

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		Pre-requisites: Must be a Fine Arts student; Must be an Honors student
THE	**493**	Honors Thesis		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be a Fine Arts student ; Must be an Honors student
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**504**	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**505**	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**510**	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**520**	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**524**	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**525**	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THE524 with a B or better
THE	**562**	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THP560 with a B or better
THE	**581**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis. Credit is allowed for only THE 581 or 480.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be a graduate student. Students who have credit for THE 480, may not enroll in THE 581
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Graduate student
THE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art Theatre student
THE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
THE	**201**	Film:Creat Procss I	Elements of the theatrical film: cinematography, sound, editing, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**320-W**	History of the Theatre	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**321**	History of Theatre	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**420**	History of the American Theatre	History of the plays, artists, and events in the development of American theatre from colonial to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
THE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**101**	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must NOT be a Theatre student
THP	**102**	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student
THP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**201**	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THP	**202**	Acting II: Realism	Rehearsal techniques and application of action to dramatic text. Emphasizes realistic drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Completed THP101 or THP102 with a B or better; Completed THE 220 with a C or better or be co-enrolled in THE 220
THP	**213**	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**214**	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**218**	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Fine Arts Theatre student; THE 220 AND THP 102 with a C or greater .
THP	**251**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**260**	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed ENG101,105 OR 107 with a C or greater or be currently enrolled
THP	**261**	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 101, 105 or 107 with C or better
THP	**272**	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**277**	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**301**	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**302**	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 101 (or THP 102), THP 202, THP 272, THP 277 and THE 220 with C or better
THP	**307**	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites:Must have completed THP101 or THP102 with a C or greater or be currently enrolled.
THP	**311**	Improvisation with Youth	Basic materials, techniques, and theories for facilitating improvisational drama with children and youth. Not open to freshmen.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman student
THP	**312**	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman or Sophomore student
THP	**313**	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**317**	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student; Corequisite: THP301
THP	**318**	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP218 AND THP213 or THP214 with a C or greater or be currently enrolled
THP	**320**	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**322**	Acting: Voice-Overs and Radio Drama	Applies effective vocal techniques to commercials, books on tape, radio dramas. Preparation of audition tape, performance in radio drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**331**	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP214 with a C or greater or be currently enrolled.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**340**	Scene Design	Studio projects in designing scenery for contemporary stages. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP 213 with a grade of C or greater and THE 220 with a grade of C or greater or be currently enrolled.
THP	**345**	Lighting Design	Principles and theory of stage lighting design, including design process and execution, equipment, and light plots. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Sophomore standing or above
THP	**350**	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a BA Theatre major OR a Fine Arts BFA student
THP	**360**	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:Must have completed ENG210 or THP260 with a C or better, or be co-enrolled in THP 260
THP	**361**	Intermediate Screenwriting	Character and dialogue development, choosing correct structure, importance of subplots, developing a story into a completed thirty-page screenplay.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 261 with D or better or currently enrolled
THP	**372**	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP272 with a B or greater or be currently enrolled; must be junior academic level or higher
THP	**377**	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**378**	Acting: Stage Dialects	Major dialects needed for actors; techniques for researching and learning dialects; phonetic analysis of dialects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP377 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**385**	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled
THP	**386**	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP 101 or THP 102 with a B or greater or be currently enrolled
THP	**387**	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP101 or THP102 with a B or greater or be currently enrolled OR must be a Film and Media Production student.
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**401**	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites: THP 301 with a C or better, or Master of Arts or Master of Fine Arts student
THP	**406**	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 completed with a C or better
THP	**411**	Methods of Teaching Drama	Applies materials, techniques, and theories with grades K-8 youth. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Graduate student OR must have completed THP311 with a C or greater or be currently enrolled
THP	**418**	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 318 with a C or greater or be currently enrolled OR Herberger Master of Art or Master of Fine Arts students
THP	**428**	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	**430**	Costume Design	Principles of costume design with projects in both modern and period styles. Includes budgets and fabric/pattern estimates.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must be a Theatre Scenography or Performance Design student OR must have completed THP214 with a C or greater or be currently enrolled
THP	**431**	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP214 AND THP331with a C or greater or be currently enrolled in both OR must be a Theatre Scenography or Performance Design student
THP	**435**	Advanced Technical Theatre	Selection of materials, drafting of working drawings, tool operation, and construction techniques.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 AND THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**440**	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**441**	Scene Painting	Studio projects in painting stage scenery. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**442**	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**444**	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP213 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**445**	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student AND have completed THP444 with a B or greater or be currently enrolled
THP	**450**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**451**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:THP 450 with a grade of D or better, or co-enrolled

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**460**	Advanced Playwriting	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage, culminating in a full-length script.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Fine Arts BFA student; Must have completed THP360 with a C or greater or be currently enrolled
THP	**461**	Scripts in Progress	Studio work with the instructor, centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP460 with a C or greater or be currently enrolled
THP	**481**	Secondary School Play Production	Methods of directing, designing, and coordinating play production experiences at the secondary school level.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**482**	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prerequisite:Must be a sophmore academic level or higher
THP	**483**	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP 202 with C or better or currently enrolled; Junior academic level or higher OR Master of Fine Arts student
THP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites:Must be a Theatre or Film student
THP	**489**	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP 101 or THP 102 and THE 220 with a B or greater; Junior academic level or higher
THP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
THP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		Prerequisites: Must be a Theatre student
THP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**501**	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**502**	Graduate Acting	Understanding and analyzing scripts and performance in order to be an effective actor/storyteller who speaks as a character. Projects focus on solo, duet performances. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**503**	Performance: the Ensemble	Ensemble, working with a playwright, creates a play that addresses social issues through improvisation and community input.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Masters of Art or a Masters of Fine Art Theatre student
THP	**504**	Acting: Styles	Fundamentals including combat, scansion, poetic language, acting style. Scene study, ensemble performance projects focused on Shakespeare, new scripts. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Pre-requisites: THP 503 with a D or better
THP	**505**	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisites: Master of Fine Art Theatre student
THP	**506**	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	**507**	Acting: Advanced Research and Performance	Acting in advanced theatre projects, productions, or collaborative performance in directing classes.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**509**	Singing for Actors	Introduces the basics of singing technique. Breath control, resonance, articulation, exploration, and expansion of singing range.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**511**	Methods of Teaching Drama	Applies dramatic materials, techniques, and theories with grades K-8 youth. Regular participation with children. Credit is allowed for only THP 511 or 411.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**512**	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Graduate student
THP	**514**	Projects in Community-Based Drama	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**518**	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**519**	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**520**	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**521**	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**522**	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**523**	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**524**	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**525**	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**526**	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**527**	Design II: Conceptualization and Collaboration	Readings and research in stage management and participation as a stage manager in a university theatre production	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**528**	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**529**	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**530**	Advanced Costume Design	Advanced studio projects in costume design for a variety of production forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Arts Theatre student
THP	**540**	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	**545**	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts Theatre student
THP	**550**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		MFA Theatre student
THP	**555**	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**556**	Performance Technology		N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**557**	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
THP	**560**	Playwright's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art Theatre student
THP	**561**	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**582**	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Fine Arts Theatre student
THP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Theatre Master student
THP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisites: Fine Arts Graduate student
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Fine Arts Graduate student
THP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**611**	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**618**	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**649**	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
TMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**331**	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre- or Co-requisites: TMC 346; ABS 350, APM 301, QBA 221, STP 420 or OMT 401
TMC	**346**	Management Dynamics	Management challenges and the leadership skills needed to achieve organizational objectives in the changing industrial and technical environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**396**	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Prerequisites:Must be at least a Junior AND be a Tech Sci BAS or BS student.
TMC	**470**	Project Management	Introduces techniques for managing small groups within larger organizations, including team building, motivating, planning, tracking activities, and computer tools.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Technology & Innovation BAS student OR IMC 346, IST 346, MGT 301 or TMC 346 with D or better and APM 301 or STP 420 with D or better. If you have credit for OMT 570, you may not enroll in TMC 470.
TMC	**480**	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		Prerequisites:Must be a Tech Sci/Engr: NonDegree or BAS or BS or MS or MS Tech Plan AND have a 2.25 GPA or better.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		Prerequisites: Must be a Tech Sci: BAS or BS AND have 3.00 GPA or better.
TMC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre Requisites: Graduate or Non Degree Students Only
TMC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TWC	**200**	Impact of Communications Technology on Society	Organizational issues and development of technical communication. Activities include research, evaluations, and presentation of oral arguments in support of positions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Must have earned C or better in ENG 102, 105, or 108 or be currently enrolled
TWC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**301**	General Principles of Multimedia Writing	Introduces writing in a variety of media, understanding the consequences of integrating media, and effective editing techniques.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**347**	Written Communication for Managers	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**400**	Technical Communications	Planning and preparing technical publications and oral presentations based on directed library research related to current technical topics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: College of Technology and Innovation BS or BSE student; senior academic level; 2.25 minimum cumulative GPA; ENG 102, 105 or 108 with C or better
TWC	**401**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 501, you may not enroll in TWC 401
TWC	**403**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**411**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Students who have credit for TWC 511, may not enroll for TWC 411
TWC	**421**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: If you have credit for TWC 521, you may not enroll in TWC 421
TWC	**431**	Principles of Technical Editing	Basic principles of technical editing (for print and electronic media) including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:May not enroll in TWC 431, if credit received in TWC 531
TWC	**443**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:If you have taken TWC 543, you may not enroll in TWC 443
TWC	**444**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 544, you may not enroll in TWC 444
TWC	**445**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you received credit for TWC 545, you may not enroll in TWC 445
TWC	**446**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 546, you may not enroll in TWC 446

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	**451**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment. Credit is allowed for only TWC 451 or 551.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 551, you may not enroll in TWC 451
TWC	**452**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for TWC 552, may not enroll in TWC 452
TWC	**453**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 453 or 553.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit in TWC 553, you may not enroll in TWC 453
TWC	**454**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 454 or 554.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	C	Pre-requisites: If you have credit for TWC 554, you may not enroll in TWC 454
TWC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**490**	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**492**	Honors Directed Study		N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-6		
TWC	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
TWC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
TWC	**501**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 501 who have credit in TWC 401
TWC	**503**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**511**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 511 who have credit in TWC 411
TWC	**521**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 521 who have credit in TWC 421
TWC	**531**	Principles of Technical Editing	Basic principles of technical editing for print and electronic media, including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 531 who have credit in TWC 431
TWC	**543**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 543 who have credit in TWC 443
TWC	**544**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 544 who have credit in TWC 444
TWC	**545**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 545 who have credit in TWC 445
TWC	**546**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 546 who have credit in TWC 446
TWC	**547**	Business Reports	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**551**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment. Credit is allowed for only TWC 551 or 451.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 551 who have credit in TWC 451
TWC	**552**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues. Credit is allowed for only TWC 552 or 452.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 552 who have credit in TWC 452
TWC	**553**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 553 or 453.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 553 who have credit in TWC 453
TWC	**554**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 554 or 454.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		

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TWC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
UET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**305**	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: Academic Level greater than or equal to Junior
UET	**331**	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: CHM 113, PHY 112, and EST 210 OR BAS Electronic & Energy Systems student
UET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**411**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 411 or 511.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisites: UET 331 and UET 417; Students with credit for UET 511, may not enroll in UET 411
UET	**415**	Electronic Manufacturing Engineering Principles	Electronic equipment design and fabrication principles and practice. Completion of electronics hardware design project and report.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2-3		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**416**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 416 or 516.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or co-requisites: UET 417; Credit for UET 516 or UET 416 only
UET	**417**	Semiconductor Technology Practice	Lab-based design and execution of safe and effective semiconductor fabrication operations.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: UET 331
UET	**418**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 418 or 518.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 518, may not enroll in UET 418
UET	**421**	IC Device Characterization	Design and operation of the major classes of semiconductor devices. Characterization by parameters and their extraction. Future technology trends.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Have received a C or greater in UET331 or be currently enrolled AND be a Tech Sci: BAS or BS or MS or MS Tech or Grad Non Degree
UET	**424**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisite: UET 417; Credit not allowed for UET 424 and UET 524
UET	**426**	Software Tools for the Semiconductor Industry	Introduces software tools commonly used in the semiconductor industry, such as SUPREM IV, PSPICE, VIEWLOGIC, and ICED.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
UET	**432**	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 532 may not enroll in UET 432.
UET	**437**	Process Control and Validation	Statistical process control and its application to IC fabrication. Design, control, and performance validation techniques throughout the manufacturing process. Lecture with Web support. Prerequisite: 300-level statistics course.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisite: UET 417 with C or better or Co-enrolled in UET 417
UET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
UET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
UET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
UET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student

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UET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**511**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 511 or 411. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for UET 411, may not enroll in UET 511
UET	**516**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 516 or 416.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Graduate status. Credit for UET 416 or 516
UET	**518**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 518 or 418.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 518 and UET 418.
UET	**521**	Device Physics	Band structure of solids, electron hole-pairs, mobility, lifetime, fermilevel, pn junctions, diodes, and bipolar and MOS transistors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**524**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 524 and UET 424
UET	**532**	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is not allowed for both UET 432 and UET 532.
UET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Grad or Non Degree Grad student AND have a 3.0 GPA or better OR be a Senior AND a Tech Sci student AND have a 3.0 GPA or better.
UET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UNI	**100**	Academic Success at the University	Orientation to campus resources, study skills, and other academic and social issues for college students. Introduces an understanding of human diversity, values, and perspectives as they relate to student success.	N	LEC	N	OPT	University College	Dean, University College	3.		
UNI	**101**	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1.		

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UNI	**150**	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	DIS	N	OPT	University College	Dean, University College	1.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	**250**	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	DIS	Y	OPT	University College	Dean, University College	1.		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**110**	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	University Academic Success Programs	3.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	University Academic Success Programs	1-4		
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	University Academic Success Programs	1-4		
UPH	**510**	Health Policy and Management	Provides (1) an overview of the U.S. healthcare delivery system and the policies that have shaped it and (2) a foundation in organizational theory and design concepts to support improved system performance. Identifies the dynamics of an organization in terms of its power and political structures, applies creative problem-solving methods, and effectively implements change. Emphasizes the interpersonal and leadership skills required to be effective advocates for public health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
URB	**100**	Introduction to Urban and Metropolitan Studies	Introduction to study of urban governance. Explores city, civil society, and urban form from different cultures and historical periods. Credit is allowed for only URB 100 or 300.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**105**	Introduction to Urban Governance	Introduces American city growth from past to present. Examines the background of major urban issues emphasizing governance, management, and policy. Credit is allowed for only URB 105 or 305.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**220**	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**240**	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**300**	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts. Credit is allowed for only URB 300 or 100.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**301**	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**302**	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**305**	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas. Credit is allowed for only URB 305 or 105.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**400**	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**405**	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 with C or better; URB 240 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
URB	**406**	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 or URB 240 with C or better
URB	**410**	Urban Leadership and Collaborative Skills	Emphasizes the changing roles of leadership and collaboration in a complex, diverse, and dynamic urban environment.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
URB	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
URB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
USL	**210**	Service Learning: Independent Placement	Provides community experiences and reflection opportunities that examine community needs, the importance of civic engagement, and the effects of social injustice on our society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals. See http://servicelearning.asu.edu for more details.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
USL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
USL	**402**	Service Learning:Tutoring Community Children	Tutoring and mentoring K-8 children attending under-resourced schools in an after-school or summer program. Design and implement fun learning activities focused on reading, writing, math, and other academic subjects. Process and learn from experience through reflective writing assignments. Fulfills community service hours required by some programs and scholarships. Honors credit available via contract. No exams. No experience with children required--training is provided.Any ASU students of any major and any level (freshman-senior and grad students) may enroll. Hours listed include 30-minutes travel time to/from internship site. Transportation from the Tempe campus is available. See http://servicelearning.asu.edu/internships for more details. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
USL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
USL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
VTN	**101**	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
VTN	**102**	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisties:VTN 101 with C or better
VTN	**201**	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 102 with a grade of C or better or currently enrolled
VTN	**202**	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 201 with a grade of C or better or currently enrolled
VTN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**321**	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 202 with a grade of D or better, or currently enrolled
VTN	**322**	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 321 with D or better
VTN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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VTN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**107**	Introduction to Academic Writing for International Students	For students from non-English-speaking countries. Combines classroom and supplemental instruction with intensive reading, writing, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: TOEFL score of 0-559, ACT score of 0-18, SAT score of 0-460 or Accuplacer score of 0-4 (if test taken prior to May 12, 2009, then score 0-7)
WAC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WPC	**101**	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**301**	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	**302**	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Pre-requisites: Must be an Honors student
WPC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WST	**318**	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	INACTIVE Women and Gender Studies Program	3.	HU & G	Pre-requisites: AFH 200, WST 100, or WST 300 with D or better. Students who have credit for AFH 318, may not enroll in WST 318
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**313**	Women and Sexuality	Explores feminist theories about women's sexuality and the relationship of these theories and related research to women's experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**360**	Women as Healers	Examines the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for AFH 364, may not enroll in WST 364
WST	**365**	Women and International Health	Advanced study in the field of international health by illustrating the realities of women's lives outside of the industrialized world. Examines these issues using vivid ethnographic materials that present the scope of everyday life for women in other countries, as well as the tragic consequences of poverty, gender discrimination, and inadequate health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with a C or better, or a minimum or 30 credit hours
WST	**371**	Sex and the City: Women, Sexuality, and Popular Culture	Examines the changing construction of young, sexually autonomous women in the city by popular media in post-WWII America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: WST 100 or WST 300 with D or better
WST	**372**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**375**	Women and Social Change	Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**377**	History of American Feminist Thought	Explores the development of American feminist theory from its roots to 1975.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	H & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**378**	Global Feminist Theory	Global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C & G	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**382**	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites:WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	
WST	**413**	Lesbian, Gay, and Gender Studies	Explores lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from sociological, psychological, historical, and literary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
WST	**421**	Girlhood and Adolescence	Examines the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**440**	Politics of Women's Health	Interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites:May not sign up for WST 447 if received credit for SGS 454, or TCL 447
WST	**460**	Women and the Body	Interdisciplinary look at how representations of women's bodies permeate culture and affect a woman's sense of self.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**464**	Voices and Visions	Explores the contributions of visionary women in the humanities; topics vary from semester to semester.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**470**	Gender and Popular Culture	Interdisciplinary examination of how gender is constructed in popular cultural forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**477**	Women and Violence	Global examination of forms of violence against women at the individual, institutional, and cultural levels, and efforts to control it.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		

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WST	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Students who have credit for PUP 547 may not enroll in WST 547
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**601**	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: degree-seeking graduate students only
WST	**602**	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**603**	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**640**	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**701**	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only

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WST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
WST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**220**	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
WST	**276**	Feminist Foundations: Going to the Sources	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**333**	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**370**	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**376**	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**390**	Women and Religions	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**430**	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**444**	Gender, Health, and Bodies	Exploresgender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	Pre-requisites: WST 100 or WST 300 with C or better
WST	**457**	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**467**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	**473**	Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**475**	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
WST	**480**	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**483**	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**485**	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled; ENG 101 or 105 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
WST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
YDL	**201**	Introduction to Youth Studies	Introduces a perspective on the everyday lives of youth in regard to experience, sex, age, relational context, and identity.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**210**	Urban Youth and Youth Studies	Explores the lives of young people from 12 to 22 years old in urban neighborhoods, communities, and cities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**301**	Adolescent and Youth Development Leadership	Applies theory and research about youth, including how findings can be used and how theories facilitate behavior understanding.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**450**	Youth Policy	Examines various federal and state policies designed for youth, how and why policies for youth are constructed.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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AAD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AAD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AAD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design MS student
AAD	**551**	Architectural Management I	Design delivery, coordination of construction documents, cost estimating, bidding and negotiations, construction observation, and postconstruction services.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be either Bldg Des(Facilities Dev/Mgt) Graduate Architecture student
AAD	**552**	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	**555**	Architect as Developer	Development building, real estate, construction funding, land acquisition, and the sources for capital.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ABS	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ABS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**207**	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**225**	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101 or CHM 113
ABS	**226**	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	
ABS	**260**	Fundamentals of Urban Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
ABS	**270**	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**274**	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**301**	Technology and Biology	Demonstrations of a broad range of innovative technologies in molecular biology, cellular and organismal biology, horticulture, and wildlife and restoration ecology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**302**	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**311**	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**312**	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: BIO 182 (or BIO 187)
ABS	**350**	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	
ABS	**355**	Anatomy and Physiology of Vertebrates	Evolution, Classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology ,specializations and conservation status of the vertebrates.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**360**	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**362**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: ABS 260
ABS	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: ABS 260
ABS	**364**	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 260
ABS	**368**	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181
ABS	**370**	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181

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ABS	**372**	Ecology: Ecosystems and Landscapes	Structure and function of ecosystems, interactions of pattern and process in landscapes	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 370
ABS	**375**	Conservation Biology	Principles of conservation biology, management of threatened species and ecosystems, biodiversity patterns; emphasizes issues in the Southwest. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 & BIO 182
ABS	**376**	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**378**	Wildlife Nutrition	Principles of nutrient metabolism in wildlife species; emphasizes understanding the interaction of wildlife with their environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**380**	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**381**	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**401**	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**402**	Vegetation and Wildlife Measurement	Vegetation inventory, sampling, monitoring, and evaluation. Methods of estimating wildlife populations, activity, and home ranges.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**425**	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**430**	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**433**	Riparian and Wetland Ecology	Functions and components of riparian and wetland ecosystems and the management of these systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**434**	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**435**	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**440**	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**441**	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects. fee	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**460**	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**462**	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**465**	Senior Enterprise Project	Selection and completion of an urban horticulture project with faculty advisor approval related to the field of study.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**470**	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**471**	Ornithology	Classification and biology of birds, emphasizing North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**475**	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**476**	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**480**	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	
ABS	**481**	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**482**	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**483**	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning. Fee.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**485**	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**486**	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**489**	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**490**	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ABS	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6		
ABS	**493**	Honors Thesis		N	THE	N	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6	L	Pre-requisites: Must be an Honors student
ABS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-7		
ABS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**540**	Plant Responses to Environmental Stresses	Reaction of plants to environmental stresses: aerial pollutants, fire, herbivores, floods, mechanical treatments, pesticides, and soil amendments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**550**	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**551**	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**553**	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**560**	Dynamic Spatial Modeling	Simulation modeling of landscapes, animal populations, and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**570**	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**586**	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ACC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**231**	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Not open to Pre-BIS or Interdisciplinary Studies students; CIS 105, 220 or 236 with C or better
ACC	**232**	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: WPC Accountancy and Finance majors, and other majors with School of Accountancy approval; CIS 105, 220 or 236 with C or better
ACC	**241**	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: ACC 231, ACC 261 or ACC 303 with C or better
ACC	**242**	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**261**	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	**271**	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**315**	Financial Accounting and Reporting	Accounting theory and practice related to uses of financial statements by external decision makers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 231 and ACC 241 with C or better
ACC	**316**	Mgmt Uses of Accounting	Uses of accounting information for managerial decision making, budgeting, and control.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 241 with C or better
ACC	**326**	External Financial Reporting I	Theory, U.S. standards, and practice applicable to financial statements, revenue recognition, and assets.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**327**	External Financial Reporting II	Theory, U.S. standards, and practice applicable to equities, cash flow statement, earnings per share, leases, pensions, and other essential topics.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: School of Global Management and Leadership Accountancy student; ACC 326 with C or better
ACC	**336**	Cost Management and Control	Concepts and principles for product costing, planning and control, and internal decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**340**	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with a grade of C or better. Pre- or co-requisite: FIN 300 or FIN 302 or FIN 303.
ACC	**346**	Information Systems Management	Information requirements and transaction processing for integrated accounting systems emphasizing database systems analysis and design, controls, and computer processing.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS or a Global Management student with Professional status
ACC	**350**	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better

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ACC	**356**	Income Tax Accounting	Public policy concepts and rules of federal income tax for all taxpayers. Individual tax returns and use of tax software.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 with C or better
ACC	**361**	Accounting Technology	Use and understanding of a computerized accounting package and other software for accounting applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 and 336 and 346 with C or better
ACC	**382**	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student
ACC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**410**	Contemporary Financial Reporting	Topics include financial statements, roles and effects of accounting information in society, policy setting, managers' choice of accounting techniques. Cannot be used for major credit in Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Business/Financial Mgt BS student AND have completed with a C or better FIN 300 or 301 or be currently enrolled or not be pursuing an Accountancy or Professional Accountancy certificate
ACC	**426**	Advanced Reporting: Consolidation, International, and Not-for-Profit Topics	Consolidated financial statements, not-for-profit accounting, and international accounting standards and topics including foreign currency transactions and translation.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326.
ACC	**430**	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 340 and LES 305 with C or better
ACC	**436**	Advanced Topics in Cost Management	Issues in contemporary manufacturing environments. Topics include cost estimation, activity-based management, just-in-time inventories, budgeting, and variances.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326, 331 or 336 or be currently enrolled
ACC	**440**	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	**444**	Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 with a grade of C or better.
ACC	**450**	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations. fee	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 and 444 with C or better
ACC	**476**	External Auditing	Theory and standards underlying the attestation process. Topics include evidence gathering, analysis, reporting, and development of professional judgement skills.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR Accountancy or Professional Accountancy Certificate; ACC 322 or 327 with C or better; ACC 346 or 347 with C or better
ACC	**477**	Internal Auditing	Contemporary issues and practices of internal auditing. Standards and process of management/operation audits.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 326 or ACC 346 or 347.
ACC	**478**	Governmental and Not-for-Profit Accounting	Accounting and reporting systems for governmental entities, healthcare organizations, colleges and universities, and other nonprofit organizations.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Must be a Global Management Accountancy BS student or pursuing an Accountancy or Professional Accountancy Certificate AND have earned a C or better in ACC 321 or 326 or be currently enrolled
ACC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**493**	Honors Thesis		N	THE	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Pre-requisites: Must be an Honors student
ACC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Pre-requisite: Accountancy BS, Finance BS or Economics BS student
ACC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	**502**	Financial Accounting	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**503**	Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student

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ACC	**511**	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**512**	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Master of Accounting student
ACC	**513**	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Specific Business Graduate majors
ACC	**561**	Auditing Through the Computer	Presents general IT audit concepts, terms, standards, practices, and current tools and techniques.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**571**	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**573**	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**575**	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**582**	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**585**	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Business Graduate student
ACC	**586**	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**588**	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	**589**	Multijursidictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Taxation student
ACC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**596**	Accounting and Leadership Capstone Project	Case-based course dealing with the pragmatics of managing risk in a variety of business settings, including public accounting, consulting, and industry.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors

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ACC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student
ACC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		
ACC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		
ACC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		
ACO	**100**	Overview of Applied Computing	Internet and HTML, XML, databases, networks and distributed processing, digital media and graphic design. Opportunities, professionalism, and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
ACO	**101**	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: MAT117 or higher with C or better
ACO	**102**	Principles of Computer Science	Issues and concepts throughout computer science, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Java programming. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 101 with C or better
ACO	**201**	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	**210**	Introduction to Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 201 with C or better
ACO	**220**	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-reqiusites: ACO 201 and MAT 243 with C or better
ACO	**320**	Database Systems and Transaction Processing	Relational database normalization theory, stored procedures, triggers, and call-level interface. Data-centric XML. Transaction processing in centralized and distributed databases. Security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 220 with C or better
ACO	**330**	Computer Networks	Network architecture and protocols, flow and congestion control, switching and routing, link-layer technologies, medium access control, physical layer basics, quality-of-service, security. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 102 with C or better

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ACO	**331**	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 330 with C or better
ACO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**420**	Object Databases	Object-oriented conceptual modeling, object-oriented databases, object-relational databases, applications. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**421**	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**422**	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**430**	Wireless Networks	Wireless transmission fundamentals, multiple access techniques, error detection and control, cellular concepts and systems, wireless LAN, performance analysis, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and STP 300 with C or better
ACO	**431**	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and MAT 243 with C or better
ACO	**432**	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210 and ACO 330 with C or better
ACO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
ACO	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
ACO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
ACO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
ADE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**321**	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Architecture student; ALA 240 with C or better
ADE	**322**	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must have completed ADE 321 with a grade of C or better or be currently enrolled; must be an Architectural Studies student
ADE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**421**	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451, ARP 484

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ADE	**422**	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must be an Architectural Studies student; Must have completed ADE 421 with a grade of C or greater or be currently enrolled; Must have completed ARP 484 with a grade of Y or be currently enrolled
ADE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ADE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ADE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ADE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ADE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	**510**	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**511**	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 510 with a grade of C or greater or be currently enrolled
ADE	**512**	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 511 with a grade of C or greater or be currently enrolled
ADE	**521**	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**522**	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ADE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**621**	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**622**	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**661**	Bioclimatic Design Studio	Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must either be Master of Architecture or Bldg Des(Energy Perform/Bldgs) MS student
ADE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AEC	**10-D**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-D**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-D**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-M**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**30**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-D**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-M**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**50-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**50-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

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AEC	**51-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-D**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-M**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-D**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-M**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-D**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-M**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**83**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-D**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-M**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**84**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-D**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-M**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

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AEC	**98-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**20**	Listening/Speaking		N	LEC	N	GNA	University College	NC American English and Culture Program	3-9		
AEC	**20-D**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**20-M**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		

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AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**40**	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		

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AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**75**	Intermediate Pronunciation/Accent Reduction		N	LEC	N	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

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AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		

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AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
AEP	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for PHI 501, or REL 581, may not enroll in AEP 501
AEP	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Completed AEP 501. Students with credit in PHI 502 or REL 582, may not enroll in AEP 502
AEP	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
AEP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
AES	**101**	Air Force Today I	Introduces U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**102**	Leadership Lab	Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**103**	Air Force Today II	Continuation of AES 101. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**104**	Leadership Lab	Continuation of AES 102 with more in-depth emphasis on learning the environment of an Air Force officer.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	**201**	The Evolution of USAF Air and Space Power I	Further preparation of the AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, quality Air Force, and values.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**202**	Leadership Lab	Application of advanced drill and ceremonies, issuing commands, knowing flag etiquette, and developing, directing, and evaluating skills to lead others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AES	**203**	The Evolution of USAF Air and Space Power II	Continuation of AES 201. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**204**	Leadership Lab	Continuation of AES 202 with emphasis on preparation for field training.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	**301**	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**302**	Leadership Lab	Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**303**	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**304**	Leadership Lab	Continuation of AES 302 with emphasis on planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**401**	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**402**	Leadership Lab	Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**403**	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.		
AES	**404**	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		
AES	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		
AET	**191**	First-Year Seminar		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**210**	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: PHY 112; Pre/Co-requisite: MAT 266
AET	**215**	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
AET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**300**	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	**310**	Instrumentation	Measurement systems, components, system response, and the characteristics of experimental data. Methods of collecting and analyzing data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MAT 266 or MAT 271; AET 210
AET	**312**	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 211 (or CON 221 or ETC 211 or ECE 210 or MAE 212); MAT 266 (or MAT 271)
AET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**396**	Aerospace Professional Orientation	Career focus for Aeronautical Engineering Technology students. Familiarization with the aerospace industry.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or higher academic level
AET	**415**	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 OR Technology and Innovation or Fulton Engineering Graduate student

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AET	**417**	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or ECE 313); AET 312 (or ECE 312); AET 300
AET	**420**	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: AET 300; MET432
AET	**432**	Applied Heat Transfer	Heat transfer by conduction, convection, and radiation. Applies heat transfer to engineering design problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre- requisites: ETC 340 or MET 340 with D or better (or co-enrolled in ETC 340); may not enroll in AET 432 if credit received in AET 524
AET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Technology and Innovation BS student; Minimum cumulative GPA of 3.00; Minimum Junior standing
AET	**487**	Aircraft Design II	Basic aerodynamics and airplane performance analysis methods applied to practical design project.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 300; AET 417
AET	**492**	Honors Directed Study		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6		
AET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
AET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**524**	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 with D or better; May not enroll in AET 524 if you have credit in AET 432
AET	**525**	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 434, AET 415 or MAE 340
AET	**560**	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Technology Innovation or Fulton Engineering students; Senior or higher academic level
AET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
AET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		

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AET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		
AET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
AFH	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & H & G	
AFH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**300**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFH	**303**	African and African American Art	Anthropological perspective of African and African American visual art traditions from the past to 1970.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**305**	The Global History of the Trans-Atlantic Slave Trade	Origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**318**	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & G	Pre-requisites: AFH 200, WST 100, or WST 300 with D or better. Students who have credit for WST 318, may not enroll in AFH 318
AFH	**319**	Black Experience in Latin America	Examines several aspects of the experience of Africans in the Latin America diaspora; comparisons with United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**331**	Studies in African American Women Writers of Pre-Harlem Renaissance	Focuses on novels, short stories, essays, speeches, and dramas that gave voices to African American woman in pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**335**	Survey of African Literatures	Intersection of colonialism, race, class, gender, nationalism, postcoloniality, social transformation, and ethnicity in African writers' fiction and literary production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees. Fee (hybrid/Internet).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
AFH	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
AFH	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for WST 364, may not enroll in AFH 364
AFH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	
AFH	**465**	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**492**	Honors Directed Study		N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		

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AFH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**191**	First Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**210**	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**317**	Genes, Race and Society	Examines history of biological and social constructions of race in western society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFR	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Students who have credit for TCL 335, may not enroll in AFR 335
AFR	**375**	Race, Gender and Sport	Interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**428**	Critical Race Theory	Examines ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**429**	African American Studies Theory and Methods	Examines social and behavioral science theories and methodological procedures pertaining to African Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**460**	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**490**	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
AFR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**525**	Foundations of Caribbean Studies	Broad interdisciplinary understanding of the Caribbean that surveys the region's history, politics, economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**526**	Selected Topics in Caribbean Politics	In-depth understanding of the impact of selected topics on the political economy and social infrastructure of the Caribbean.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		

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AFR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		

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AFR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFR	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
AFR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
AFS	**200**	Introduction to African and African Diaspora Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**301**	Race and Racism in Africa/African Diaspora	Construction of race, racism, and race relations in Africa/African Diaspora; practices of agency to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	
AFS	**304**	Islands of Globalization: Caribbean Political Economy	Impact of globalization on the economic, political, and social condition of the islands and mainland countries of the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**310**	African/African American Psychology	Historical and contemporary overview of the development of African/Black psychology and African American frame of reference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**312**	Contemporary African and African Diaspora Women	Explores recent literary, theoretical, and methodological themes concerning the study of African/African Diaspora women and the phenomena of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**320**	Africa: Politics, Environment, and Development	Uses African experience to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**327**	Human Rights in Africa	Comparative study of human rights focusing on colonial and post-colonial Africa from historical and contemporary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: ASB 222
AFS	**340**	The Making of Modern Africa	Events and processes leading to the colonization of Africa and subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**345**	The Making of the Caribbean Society	Historical socioeconomic and political factors and institutions creating the wider Caribbean from the 15th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**355**	Democracy and Civil Society in Africa	Examines contending perspectives on the state and civil society and democratic struggles using sub-Saharan Africa and case study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**360**	Black Families in the Diaspora: U.S. and Caribbean	Comparative study of historical and current themes in the structure and internal dynamics of African Diaspora families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**363**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**364**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C & H	
AFS	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**370**	Family, Ethnic, and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	

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AFS	**372**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, REL 362, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or SGS 366
AFS	**373**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
AFS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**415**	Black Political Thought and the Limits of Liberal Democracy	Critical examination of the ideas that have shaped politics in the Black World from the mid-nineteenth century onwards. These include ideas of resistance, liberation, nation and governance, emanating from Africa, the USA, the Caribbean and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**480**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**100**	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**161**	Computer Applications for Agribusiness Industries	Uses and integrates word processing, spreadsheets, and databases as tools for managing an agribusiness firm.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**271**	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**302**	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	G	Prerequisites: ECN 212 with grade of C or better
AGB	**321**	Agribusiness Marketing II	Examines the food marketing system with emphasis on the marketing institutions, arrangements, and methods for basic commodities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**333**	Agribusiness Finance II	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

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AGB	**340**	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**360**	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**366**	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**367**	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**372**	Introduction to Veterinary Practice Management Module I	Initial offering of a three-module program that is an overview of the operation of a veterinary practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**373**	Veterinary Practice Management Module II: Human Resources	Intermediate course of a three-module program covering human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**374**	Veterinary Practice Management Module III: Finance and Marketing	Final course of a three-module program covering financial and marketing issues faced by veterinary practice managers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**410**	Agribusiness Management II	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**411**	Agricultural Cooperatives	Organization, operation, and management of agricultural cooperatives.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**414**	Agribusiness Analysis	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	L	Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed BUA 440 or BUA 441 with a C or better.
AGB	**422**	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300
AGB	**424**	Agribusiness Sales	Principles and techniques of selling and merchandising in the agricultural and food industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**425**	Agricultural Marketing Channels	Operational stages of agricultural commodities in normal distribution systems and implementation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**429**	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	**431**	Intermediate Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**433**	Intermediate Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**434**	Agricultural Risk Management and Insurance	Strategies to manage agricultural price and business risk: derivatives, insurance, self-insurance, and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**435**	Agricultural Commodities	Trading on futures markets. Emphasis on the hedging practices with grains and meats. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: FIN 300 with a C or better.
AGB	**436**	Entrepreneurship and Financial Management ofE-Commerce	Uses lectures, case studies, and business plans to highlight challenges of starting and running a small business.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**440**	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**442**	Food and Industrial Microbiology	Food- and industrial-related microorganisms; deterioration and preservation of industrial commodities. Lecture, lab.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
AGB	**445**	Food Retailing	Food retail management. Discusses trends, problems, and functions of food retail managers within various retail institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300 with C or better.
AGB	**451**	Management Science	Focuses on the construction, solution, and interpretation of quantitative models used for management decision making in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
AGB	**452**	International Agricultural Policy	Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**454**	International Trade	International practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: FIN 300 with C or better
AGB	**455**	Resource Management	Explores differences between societal and individual valuations of natural resources; considers public policy versus market-based solutions to environmental concerns.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	SB	

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AGB	**460**	Agribusiness Management Systems	Development and use of decision support systems for agribusiness management and marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: 56 hours or more; FIN 300; MGT 300; MKT 300
AGB	**465**	Organic Farming Technologies	Organic farming methods, including certification, soil fertility, planting, integrated pest management, irrigation, cover crops, rotations, and marketing farm products.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**470**	Comparative Nutrition	Effects of nutrition on animal systems and metabolic functions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**481**	Applied Microeconomics	Emphasizes application of the theory of the firm, theory of exchange, and consumer theory.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6		
AGB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AGB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-7		
AGB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-3		
AGB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**511**	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**513**	Advanced Cooperatives	Advanced study of cooperatives and other nongovernmental organizations (NGO) focusing on management and proposal preparation for international agencies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**514**	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**528**	Advanced Agribusiness Marketing	Theory and analysis of marketing farm commodities, risks, and the effect of future trading on cash prices.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**529**	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**532**	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**535**	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**540**	Advanced Food Science	Chemical and physical nature of processed foods. Emphasizes food product development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**550**	International Agricultural Development	Transition of developing countries from subsistence to modern agriculture. Emphasis placed on implications for U.S. agribusiness working abroad.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**552**	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**554**	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**560**	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**561**	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**570**	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AGB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**581**	Advanced Agribusiness Policy	Policy-making history, structure, and process.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**589**	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
AGB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**701**	Advanced Agribusiness I	Advanced topics include demand analysis, empirical industrial organization, welfare economics, agricultural policy, international trade, and consumer behavior.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**702**	Advanced Agribusiness II	Topics include macromarketing, marketing research, futures and options markets, derivatives, risk management, financial innovation, and forecasting.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**703**	Agribusiness Research Methods	Survey course in current research methods in economics, marketing, finance, and management as applied to agribusiness topics. May be repeated for credit.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		

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AGB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		
AIS	**180**	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**280**	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**285**	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**370**	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisite: AIS 180 with C or better
AIS	**380**	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**381**	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**420**	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	L	Pre-requisite: AIS 180 with C or better
AIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7		
AIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
ALA	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
ALA	**102**	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**121**	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student
ALA	**122**	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 121 with a C or better; Co-requisite: ALA 124
ALA	**124**	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 122

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ALA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALA	**200**	Introduction to Architecture	Surveys issues and polemics affecting current architectural theory and practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**225**	Design Fundamentals III	Applies design fundamentals with an emphasis on architectural and landscape architectural issues.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with a C or better; Passed milestone; Co-requisite: ALA 227 and ALA 235;
ALA	**226**	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: ALA 225 with C or better
ALA	**227**	Design Fundamentals III Lecture	History and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 225 and ALA 235
ALA	**235**	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisites: Architecture or Landscape Architecture student; Co-requisites: ALA 225 and ALA 227
ALA	**240**	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ALA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALD	**101**	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	
ALD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**202**	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**203**	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	**204**	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**301**	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**404**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**420**	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	**431**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531or FAS 421
ALD	**440**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**460**	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).

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ALD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Pre-requisites: Must be an Honors student
ALD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7		
ALD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**505**	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**520**	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	**525**	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**531**	Caregiving Issues for Familes and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	**535**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		
ALD	**540**	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**545**	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisite: Graduate students only
ALD	**560**	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ALD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**360**	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**401**	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; Credit is allowed for only ALT 401 or 501
ALT	**405**	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	**410**	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: UET 331
ALT	**420**	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: CHM 113; ALT 360
ALT	**435**	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360 and ALT 410. Students who have credit for ALT 535, may not enroll in ALT 435
ALT	**445**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 and ALT 360. Students with credit for ALT 545, may not enroll in ALT 445
ALT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
ALT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**501**	Advanced Renewable Energy: Global Hydrogen Economy	Global, comprehensive evaluation of all renewable energy sources with focus on solar cells, hydrogen, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Students who have credit for ALT 401, may not enroll in ALT 501
ALT	**502**	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**503**	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**505**	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Credit is allowed for only ALT 405 or 505
ALT	**506**	Fuel Cell Integration and Packaging	Practical overview of integration and packaging of fuel cell system, which comprises a fuel processor module, a fuel cell module.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**507**	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**515**	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**535**	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit in ALT 435, may not enroll in ALT 535
ALT	**545**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is allowed for only ALT 445 or 545

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ALT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		
AME	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Pre-requisites: Must be an Honors student
AME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7		
AME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**590**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1.		
AME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		
AME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		

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AML	**100**	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
AML	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**330**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit is allowed for only ASB 430, CPI 430, or AML 330
AML	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**406**	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Completed at least two from the following: MAT 270, 271, 272; AND STP 226 (or 231 or 420)
AML	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**493**	Honors Thesis		Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**497**	Honors Colloquium		Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
AML	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AML	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**610**	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**611**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**612**	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AML	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**301**	Introduction to American Studies	Introduces the interdisciplinary study of American culture, emphasizing critical reading and writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**310**	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**311**	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**314**	Military Studies	Topics in the history of the American military.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**316**	American Religious Systems	Topics in American religion; may include Hispanic missions of the Southwest. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**320**	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
AMS	**321**	American Cultural History II	Second of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**322**	Studies in American Literature	Topics in American literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**323**	Studies in American Art and Architecture	Topics in the visual arts and material culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**326**	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**327**	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**330**	Introduction to American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
AMS	**332**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**334**	The American Class System	Studies in social classes and their function within American society. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

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AMS	**335**	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**342**	Writing about American Culture	Teaches methods of writing cultural criticism, emphasizing the essay form.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**344**	Creative Writing	Emphasizes the study and practice of creative nonfiction. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**345**	Reporting	Fundamentals of news gathering, interviewing, and in-depth reporting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**346**	Editing	Theory and practice of editing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**351**	Technical Writing	Computer-based instruction in writing documents for online, oral, and print formats, focusing on audience-centered rhetoric.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**412**	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**414**	Military Studies	Topics in the history of the American military. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**417**	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**422**	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**428**	Chicano Cultures in the Southwest	Examines and explores Chicana and Chicano culture as place and sentiment. The physical place and space and the sentiment related to Chicanas and Chicanos.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
AMS	**429**	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**431**	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**432**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**490**	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
AMS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
AMS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
AMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

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AMS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMT	**100**	Flight Operations and Safety I	Supervised private pilot flight training and flight safety briefings and recurrent aviation subjects appropriate for private pilots. Requires continuous enrollment until completion of FAA Private Pilot Certificate. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND must have C or greater in AMT 182 and AMT 220 OR Corequisite: AMT220 and AMT182
AMT	**101**	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**182**	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**200**	Flight Operations and Safety II	Supervised commercial instrument flight training, safety briefings, and recurrent aviation subjects as appropriate for commercial and instrument pilots. Requires continuous enrollment until completion of FAA Commercial Pilot Certificate with Instrument Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student AND C or better in AMT 100
AMT	**201**	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) OR Aero Mgmt Tech (AWS Mgmt) OR Air Traffic Management student
AMT	**214**	Commercial/Instrument Ground School I	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT182, AMT220 and AMT101 with C or better
AMT	**220**	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**280**	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned a D or better in PHY 111, and PHY 113
AMT	**287**	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned D or greater or currently enrolled in PHY 111 or PHY 121 OR Corequisite: PHY111 or PHY121
AMT	**300**	Flight Operations and Safety III	Supervised instructor flight training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of FAA Flight Instructor Certificate with Instrument Instructor Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student; AMT 200 with C or better
AMT	**308**	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisite: Total earned hours must be greater than or equal to 50
AMT	**322**	Commercial/Instrument Ground School II	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater or currently enrolled in AMT100, AMT182 and AMT214

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AMT	**330**	Managing Financial Resources in Aviation	Focuses on financial resource management techniques utilized by U.S. domestic air carriers and covers the unique aspects of revenue accounting and its application to airline operations. Concepts covered include: data capture of requisite information from various airline computer systems; determination of revenues generated from sales of airline products and services to customers; in-depth analysis of airline operational expenses; preparation of airline-specific accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting to U.S. governmental agencies; development/analysis of financial reports; and interline billing. Emphasizes accounting, planning, and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: AMT 308 with C or better
AMT	**350**	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements. fee	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a C or greater in AMT280 and AMT287 or be currently enrolled OR Corequisites: AMT287
AMT	**370**	Air Freight Operations	Air freight operations in National Aviation System; ramp operations, loading, weight and balance, and administration of airside and groundside operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**382**	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater in AMT200 or AMT322 or be currently enrolled
AMT	**385**	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**387**	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 200 with a C or better.
AMT	**391**	Multiengine Instructor Ground School	Ground school preparation for the FAA Multiengine Flight Instructor Rating. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisite: Technology Science BS student
AMT	**392**	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must be Technology Science BS student AND earned C or greater or currently enrolled in AMT 200 and AMT 385
AMT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**396**	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisite: Technology Science BS or BAS student; Minimum 50 hours
AMT	**400**	Flight Operations and Safety IV	Multiengine and crew training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of multiengine rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Must be Aero Mngt Tech (Prof Flight) student. AMT 300 with a C or better.
AMT	**401**	Multiengine Instructor Rating	Normal and emergency flight operations. Instruction techniques and procedures for light multiengine land, airplane. CFIAME Rating required for course completion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**408**	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must have a C or greater in AMT 308 or be currently enrolled
AMT	**410**	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**412**	Air Transportation Research	Surveys practical research methodology in use in the air transportation industry. Topics include planning and design considerations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**442**	Aviation Law/Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**444**	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum Junior standing
AMT	**482**	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT200 or 322 with a C or better; AMT 382 with a C or better.

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AMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
AMT	**486**	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT300, AMT382 and AMT 482 with C or better
AMT	**488**	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT 300, AMT 382 and AMT 482 with C or better
AMT	**489**	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic level must equal Junior or greater AND must have a C or greater in AMT 308 or be currently enrolled
AMT	**490**	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Aero Mngt Tech (Prof Flight) student; AMT 300, 400, 382, 482, 486 and 488 with C or better
AMT	**491**	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic Level greater than or equal to Senior
AMT	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Prerequisite: University Cumulative GPA is greater than or equal to 2.25
AMT	**496**	Airline Aircraft Systems Capstone	Commercial airline aircraft systems and flight procedures. Includes theoretical education for large, commercial passenger aircraft.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
AMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
AMT	**520**	Airline Pricing and Yield Management	Airline economics at the operating level; historical and current operational strategies; demand, traffic, price, yield, revenues, and costs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**521**	Air Transportation Regulation	Reviews evolutionary history of government regulations. Explores alternatives for economic, safety, social, and administrative regulatory reform in air transportation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**522**	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**523**	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**524**	Airport Management and Operations	Overview of planning, funding, and development of airport facilities; legal and ethical considerations associated with airport management operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**525**	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**526**	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**527**	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**528**	International Aviation	Major issues of international aviation, historical review of institutional framework. Bilateral route agreements, freedom versus sovereignty, current legal and political arrangements.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater

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AMT	**529**	Fixed-Base Operations Management	Examines FBO role in the national aviation system. Organization of flight line operations, aircraft maintenance, and administration for multiple aircraft types.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**532**	Managing Diversity in Aviation	Examines group identity and cognitive styles, cross-cultural issues, language and diversity, and effects of aviation culture on management of diversity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**541**	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**542**	Human Factors in Automation	Examines human factors issues associated with automation. Includes impact of automation design, workload, stress, and system complexity on human operators.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**545**	Human Factors in Aviation	Overview of human role in aviation. Issues, problems of unsafe acts and attitudes in human behavior. Human engineering capabilities and limitations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**546**	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**549**	Applied Human Factors Research	Aviation human factors research principles applied and tested in operational settings. Group projects assigned in conjunction with industry partners.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
ANB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

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

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANB	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ANB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ANB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
ANP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**475**	Computer Programming in Architecture	Computer programming for architectural problems and applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ANP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ANP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student

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ANP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ANP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	**530**	Computer Graphics in Architecture	Fundamentals of computer graphics programming in architecture, including graphics hardware, device-independent packages, 2- and 3-D transformations, and data structures.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be MS Building Design Knowledge and Computing student
ANP	**561**	Architectural Information Processing Systems	Applies information processing systems to architectural problems. Analyzes computing tools with respect to assumptions and theories.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bld Design (Knowledge/Compng) MS student
ANP	**563**	Methods in Architectural Design Computation	Concepts and models for research in computer-aided architectural design with an emphasis on computational methods and a system framework.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Bld Design (Knowledge/Compng) MS student
ANP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
ANP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	**681**	Project Development	Defines and elaborates on major ideas for implementation in ADE 622 in relation to contemporary theory and practice.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student

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ANP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**200**	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
APA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**315**	Asian Pacific American Literature	Explores the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**330**	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**340**	Asian Pacific Americans and Media	Analyzes social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C & H	
APA	**360**	Asian Pacific American Experience	Historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**450**	Asian Pacific American Contemporary Issues	Focus on issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
APA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
APA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
APH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**212**	Culture of Place	Explores contemporary conditions in the built environment as they are shaped by cultural phenomena.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**300**	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	**305**	Contemporary Architecture	Europe and America from the foundations of the modern movement to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Non-majors only (non-architecture students)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	**313**	History of Architecture I	Surveys the monuments, buildings, and cities of Europe and Africa from the earliest human settlements to the present day.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisite: Juniors and Seniors only
APH	**314**	History of Architecture II	Surveys the monuments, buildings, and cities of Asia and the Americas from the earliest human settlements to the present day.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisites: APH 313 with a C or better
APH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**411**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
APH	**414**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for PUP 412 or APH 414 only
APH	**421**	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L or HU	Pre-requisites: Architecture student; APH 313 and APH 314 with C or better
APH	**441**	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**446**	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**447**	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
APH	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
APH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
APH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**505**	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	**509**	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	**511**	Energy Environment Theory	Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Architecture, Master of Urban Design or Building Design MS student

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APH	**515**	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**581**	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**588**	Spanish Language Acquisition		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

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APL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
APL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
APL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**601**	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
APL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		

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APL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
APL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
APL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
APL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
APL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
APM	**501**	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**502**	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**503**	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzela Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p-spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**504**	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**505**	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**506**	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**520**	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**521**	Numerical Analysis for Ordinary Differential Equations	Stability, accuracy, consistency, RK methods, finite differences, linear partial differential equations, dispersion, dissipation, method of lines. Applications and programming. Students should have had a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**522**	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

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APM	**523**	Optimization	Linear programming, unconstrained nonlinear minimization, line search algorithms, conjugate gradients, quasi-Newton methods, constrained nonlinear optimization, gradient projection, and penalty methods. Completion of courses in Applied Linear Algebra and Computational Methods is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**524**	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**525**	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**526**	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**530**	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**531**	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**532**	Mathematical Neuroscience II	Mathematical modeling of systems neuroscience. Network dynamics, coupled phase oscillators, central pattern generators, neural coding, learning and memory. Students should have taken ordinary differential equations or mathematical cell physiology or mathematical neuroscience prior to enrolling in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**533**	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**534**	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**535**	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**541**	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**553**	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**560**	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**561**	Nonlinear Analysis of PDEs in Fluids	Sobolev spaces; incompressible Euler and Navier-Stokes equations; weak and strong solutions; attractors and the connection with turbulence; geophysical applications. Completion of a course in Differential Equations II is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

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APM	**570**	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**575**	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	**576**	Theory of Partial Differential Equations	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**577**	Theory of Partial Differential Equations	Continuation of APM 576. Completion of a course in the Theory of Partial Differential Equations is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**581**	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**582**	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
APM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
APM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
APM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
APM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
APM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
AR	**461**	Adv Ceramics I		Y	LEC	Y	CNV	Herberger College of the Arts	School of Art	3.		
ARA	**110**	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1.		
ARA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**195**	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARA	**202**	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARA	**311**	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Non-ART student; ENG 101; ENG 102; Minimum Junior standing
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	**488**	Understanding Art	Understanding art as an emergent cultural phenomenon with an emphasis on a critical examination of conceptual issues in art. Writing required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L or HU	Pre-requisites: ARS 101; ARS 102
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

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ARB	**101**	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**102**	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**201**	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**202**	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**311**	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**321**	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**331**	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**335**	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
ARB	**341**	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**351**	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**411**	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**421**	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
ARB	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ARB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ARB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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ARB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	**250**	Teaching Inquiry in Art	Uses inquiry and literacy processes to teach young people through adults to make and understand art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**301**	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARE	**370**	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with C or better
ARE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**440**	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Must be an Art student. Completed ARE 250 with a B- or better
ARE	**482**	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Fine Arts Art student
ARE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**486**	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 482 with C or better
ARE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARE	**493**	Honors Thesis		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**496**	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with B- or better
ARE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	**510**	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**520**	Issues in Teaching Inquiry in Art	Issues in teaching and learning through inquiry about artworks using print and electronic reproductions and information.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**525**	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**530**	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**535**	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**540**	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**610**	Issues and Trends in Art Education	Doctoral-level investigation of historical and contemporary issues related to teaching and research in art education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**611**	Curriculum Development in Art Education	Doctoral-level inquiry into the philosophical, psychological, and sociological foundations of curriculum development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**451**	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ARP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ARP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ARP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Architecture student
ARS	**100**	Introduction to Art	Understanding of art and its relationship to everyday life through painting, sculpture, architecture, and design. No credit for Art majors or non-Art majors who have completed ARS 101 or 102 or 300.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 101, 102, or ARS 300 may not enroll in ARS 100
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**201**	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**250**	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**300**	Introduction to Art	Course content same as ARS 100 but requires a higher level of accomplishment and comprehension. No credit for Art majors or non-Art majors who have completed ARS 100. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 100 may not enroll in ARS 300
ARS	**302**	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	**310**	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**340**	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**362**	Pre-Columbian Art I	Architecture, sculpture, ceramics, painting, and other arts of Mesoamerica before European contact. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**365**	Native North American Art	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**400**	History of Printmaking	History of the print as an art form and its relation to other modes and forms of artistic expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**402**	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better
ARS	**404**	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 with C or better; Minimum Junior standing; Credit is allowed for only ARS 404 or 504
ARS	**406**	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**410**	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**412**	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**414**	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better; Students who have credit for ARS 514, may not enroll in ARS 414
ARS	**416**	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**417**	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 417 or 517
ARS	**418**	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**422**	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**424**	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102

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ARS	**426**	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**428**	Art of the 18th Century	History of painting, sculpture, architecture, graphic arts, and the decorative arts from 1700 to the French Revolution (1789).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 428 or 528
ARS	**430**	Art of Spain and its Colonies	Architecture, painting, and sculpture from 1500 to 1800. Colonial focus on central Mexico and the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 430 or 530
ARS	**432**	19th-Century French Art and Culture	History of painting, graphic arts, sculpture, and architecture, 1800 to 1900 in France in its political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better
ARS	**434**	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 534, may not enroll in ARS 434
ARS	**435**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ARS	**436**	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**437**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ARS	**438**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisite: ARS 102 with C or better
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better
ARS	**442**	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**451**	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**458**	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**459**	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 458
ARS	**460**	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 439
ARS	**466**	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	
ARS	**468**	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**469**	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art hIstory requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**472**	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**473**	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**475**	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 475 or 575
ARS	**480**	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**485**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 585, may not enroll in ARS 485
ARS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		

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ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	**501**	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**502**	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101 with C or better
ARS	**504**	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504
ARS	**506**	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**514**	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or Post Bacc Undergraduate or a Graduate Student; Students who have credit for ARS 414, may not enroll in ARS 514
ARS	**516**	Critical Approaches to Gothic Art	Architecture, sculpture, painting, and the minor arts in western Europe, ca. 1150-1350, considered within religious, social, and economic contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**517**	Critical Approaches to Late Gothic Art	Art of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts. Requires research or reading project.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 417 or 517
ARS	**522**	Sixteenth-Century Italian Art	Critical study of painting, sculpture, and architecture in 16th-century Italy in its religious and historical context.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**528**	Eighteenth-Century Art in Europe	Critical study of European art from the late Baroque to the early years of Neoclassicism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 428 or 528
ARS	**530**	Art of Spain and New Spain	Critical study of architecture, painting, and sculpture from 1500 to 1800.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 430 or 530
ARS	**532**	Art, Politics, and Patronage, 1770-1850	Critical analyses of political events in Europe. Examines issues of patronage, art as propaganda. Impact of war and revolution on visual arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**534**	Studies in Modern European Art, 1850-1914	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours must be greater than or equal to 108; Must be a Senior or a Post Bacc Undergraduate or be a Graduate Student. Students who have credit for ARS 434, may not enroll in ARS 534
ARS	**542**	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**562**	Art of Ancient Mesoamerica	Critical study of art and architecture of Mexico and Maya areas before Spanish contact.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**565**	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**574**	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101, ARS 102 with C or better
ARS	**575**	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 475 or 575
ARS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**585**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Students who have credit for ARS 485, may not enroll in ARS 585
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		

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ARS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		
ARS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**438-W**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	

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ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**453**	Experimental Printmaking	Alternative techniques and methods to traditional approaches to printmaking. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger College of the Arts	School of Art	3.		
ART	**111**	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**112**	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**113**	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**115**	3-D Design	Fundamentals of 3-D form. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**201**	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Co-requisite: ART 202
ART	**202**	Photography I Lab	Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0.		Co-requisite: ART 201
ART	**204**	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisites: Art Undergraduate student; ART 101 or ART 201 with C or better
ART	**205**	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 201, 202 with C or better
ART	**211**	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**214**	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. Lab. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**223**	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**227**	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**231**	Sculpture I	Explores sculptural forms through concepts related to basic materials. Focus on studio production, safety, aesthetic criticism, and history of sculpture. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 115 with C or better
ART	**253**	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:Art undergraduate student; ART 113 with C or better
ART	**261**	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 112 and ART 115 with C or better
ART	**272**	Metalworking I: Introduction	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming. Not open to seniors. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**274**	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		

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ART	**276**	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, feltmaking, dyeing, block printing, plaiting, 3-D structures. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**301**	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art major with completed portfolio; ART 204 with C or better
ART	**304**	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**307**	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student; ART204 and (ART101 or ART201) with C or better
ART	**308**	Digital Photographic Images I	Scanning, manipulation, refinement, and compositing of photographic images on the computer. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**311**	Drawing III	Emphasizes composition, exploration of drawing media. 6 hours a week. Requires acceptance into the appropriate professional program or instructor approval. Contact your academic advisor in the School of Art for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 with C or better
ART	**314**	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student or completion of portfolio milestone; ART 214 with C or better
ART	**323**	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio; ART 223 with C or better
ART	**325**	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 214 and ART 323 with C or better
ART	**327**	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 227 with C or better
ART	**331**	Sculpture II	Continuation of ART 231 with an emphasis on metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio completed; ART 231 with C or better
ART	**332**	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: ART 331 with C or better
ART	**333**	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 332 with C or better
ART	**345**	Visualization and Prototyping I	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Digital Art OR Intermedia student
ART	**346**	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequistes: Must be an ART student
ART	**348**	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ART 346 with C or better
ART	**351**	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. Studio 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): ART 253 with C or better
ART	**352**	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**354**	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student; Completed two from ART 111, 112, 113 with D or better
ART	**355**	Printmaking as Photography	Introduces photographic principles and skills for photomechanical printmaking processes, including photosilkscreen, photolitho, and photoetching. 6 hours a week. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**360**	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application. 6 hours a week. May be repeated once for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 with C or better
ART	**363**	Ceramic Clay-Glaze		N	LEC	N	CNV	Herberger Inst Design & Arts	School of Art	3.		
ART	**364**	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 with C or better
ART	**365**	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**372**	Metalworking II	Metal fabrication techniques including surface embellishment. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**373**	Metalworking III	Compression, die, and stretch forming as applied to hollow form construction. Hot and cold forging techniques as applied to smithing. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better

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ART	**374**	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 with C or better
ART	**376**	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**377**	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**403**	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**404**	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**406**	Photo Techniques	Camera and darkroom techniques with emphasis on creative control of the black and white print. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student and you must have a C or greater in ART204 AND ART101 or ART201
ART	**408**	Digital Photographic Images II	Develops personal aesthetic in digital photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:ART 308 with a grade of D or better
ART	**409**	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**410**	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**411**	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 and ART 311 with C or better
ART	**414**	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ART 314
ART	**415**	Art Anatomy	Study of human anatomical structures as applied to the practice of figure-oriented art. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	4.		Prerequsites: Art student; ART 214 with C or better
ART	**423**	Painting III	May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223 and ART 323 with C or better
ART	**425**	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223, ART 323 and ART 314 with C or better
ART	**427**	Advanced Watermedia	Continuation of ART 327. Advanced techniques, concepts, and methods with watercolor and other water-based media on paper. 6 hours a week. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**431**	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and 332 with C or better
ART	**432**	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**435**	Foundry Research Methods	Research in foundry techniques.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**436**	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and ART 332 with C or better
ART	**437**	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**438**	Experimental Systems in Sculpture	Simple electrical and mechanical systems that can be utilized in the context of studio art and installations. Requires active production of studio artworks. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**439**	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**440**	New Media Concepts	Continued experiments with new media and interdisciplinary concerns in art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Corequisite(s): ART 441
ART	**441**	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1.		Pre-requisite: Art portfolio completed; Co-requiste ART 440
ART	**442**	Folk/Outsider Art	Explores ideas, attitudes, and art of contemporary self-taught, visionary, and outsider artists. Research and studio practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**443**	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: Art student
ART	**449**	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346 and ART 348 with C or better

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ART	**450**	Computer Animation and Audio	Integrates audio with 3-D animation for fine arts applications. Includes compositing and effects. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346, ART 348 and ART 449 with C or better
ART	**451**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 351 with C or better. Credit is allowed for only ART 451 or 551
ART	**452**	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 352 with C or better
ART	**454**	Advanced Screen Printing	Continuation of ART 354. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 354 with C or better
ART	**455**	Advanced Photo Processes for Printmaking	Continued study of photomechanical techniques and applications to printmaking or photographic processes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 355 with C or better
ART	**456**	Fine Printing and Bookmaking I	Letterpress printing and typography as fine art. Study of history, alphabets, mechanics of hand typesetting, presswork, and various forms of printed matter. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**457**	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 456 with C or better
ART	**458**	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**459**	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student or Completed the portfolio milestone; ART 253 with C or better
ART	**460**	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Art student AND you must have a C or greater in ART261 AND ART360 AND ART364(or be currently enrolled in ART360 & ART364) AND
ART	**463**	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 and ART460 with C or better
ART	**466**	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**470**	Computer Animation Portfolio	Production of videotape and CD 3-D animation portfolios for fine arts and industry integrating animation, video, and audio. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequsites: You must be an ART student AND you must have a C or greater in ART346 AND ART348 AND ART449(or be currently enrolled in ART348& ART449) AND
ART	**472**	Metalworking IV	Forging, forming, and surface metalworking techniques with a focus on personal statements and craftmanship. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 372 with C or better
ART	**473**	Metalworking: Special Problems	Special problems in metalworking related to techniques and individual directions. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 373 with C or better
ART	**474**	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 and ART 374 with C or better
ART	**476**	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 376 with C or better
ART	**477**	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 377 with C or better
ART	**478**	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	**479**	3-D Fibers	Explores traditional and nontraditional 3-D fiber techniques and media. Discussion, research, and critiques augment technical demonstrations. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisite: Art student
ART	**492**	Honors Directed Study		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**493**	Honors Thesis		N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequsites: You must be an Honors student
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		

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ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Pre-requsite: Art student
ART	**530**	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**540**	Digital Motion Studies	Fine arts digital motion studies using computer animation and video. Studio. Fee. Prerequisite: ART 346 or instructor approval. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**551**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ART 451 or 551
ART	**582**	Art Research	Independent study research using classroom facilities and supplies.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**621**	Studio Problems	Advanced study. 6 hours a week each section. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		
ART	**682**	MFA Exhibition Research	MFA exhibition practicum using classroom facilities and supplies. Can be used in place of ART 680.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		

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ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requsite: Art student
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AS	**150**	Animal Husbandry		Y	LEC	Y	CNV	Ira A. Fulton Engineering	W. P. Carey School of Business	3.		
ASB	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**101**	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
ASB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: Students who have credit for SSH 200, may not enroll in ASB 200. Must have ENG 101, 105, 107, or ENG 111.
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**210**	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view across various cultures around the globe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**223**	Buried Civilizations of the Americas	Archaeology through examination of several ancient civilizations of Meso-, South, and North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**230**	Beginning Culture Theory	Bridges ASB 102 and upper-division courses; introduces cultural theory and fosters independent thinking, critical analysis, communication, and adaptability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**231**	Arch Field Methods	Excavation of archaeological sites and recording and interpretation of data. Includes local field experience.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**252**	Anthropology of Sports	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		

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ASB	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better,. If you have credit in SSH 301 or HST 301, you may not enroll in ASB 301
ASB	**302**	Ethnographic Field Study in Mexico	Fieldwork study of cultural adaptation, Mexican culture, United States-Mexican cultural conflict, ethnographic research methods, and local culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**310**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**314**	Comparative Religion	Origins, elements, forms, and symbolism of religion; a comparative survey of religious beliefs and ceremonies; the place of religion in the total culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**320**	Indians of Arizona	Traditional cultures and the development and nature of contemporary political, economic, and educational conditions among Arizona Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & H & C	
ASB	**322**	Peoples of Mesoamerica	Indigenous, mestizo, and national cultures, rural and urban peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**324**	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**325**	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**326**	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**327**	Action Anthropology	Explores contemporary issues and problem solving in Cuna, Micronesia, Mayan, and U.S. Latino communities, through applied anthropology and community initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**328**	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	**330**	Principles of Archaeology	Methods and theories for reconstructing and explaining the lifeways of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ASB 222 or ASB 223, with a grade of D or better
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**337**	Pre-Hispanic Civilization of Middle America	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**338**	Archaeology of North America	Origin, spread, and development of the prehistoric Indians of North America up to the historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**344**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU	
ASB	**351**	Psychological Anthropology	Approaches to the interrelations between the personality system and the sociocultural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	Pre- or corequisite: ASB 100 (or 101 or 102 or 222 or 223) or ASM 104 (or 246) or BIO 100 (or 181 or 182) or SSH 100; Students who have credit for SOC 353, may not enroll in ASB 353
ASB	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	**361**	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**362**	The Neolithic Revolution and its Consequences	Surveys models for the appearance of food production in the Old World, and its consequences for emergent social complexity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**368**	Prehistoric and Historic Hunter-Gatherers	Studies known hunting and gathering societies with the goal of developing approaches to understanding past hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**400**	Cultural Factors in International Business	Anthropological perspectives on international business relations; applied principles of cross-cultural communication and management; regional approaches to culture and business.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**402**	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**412**	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**416**	Economic Anthropology	Economic behavior and the economy in preindustrial societies; description and classification of exchange systems; relations among production, exchange systems, and other societal subsystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**417**	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit for only AML 330, CPI 430, or ASB 430
ASB	**443**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for SSH 403, you may not enroll in ASB 443
ASB	**452**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better, or currently enrolled. If you have credit for SSH 402, you may not sign up for ASB 452
ASB	**455**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**462**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
ASB	**463**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**464**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for TCL 444,may not enroll in ASB 464
ASB	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**471**	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**480**	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**481**	Language and Culture	Applies linguistic theories and findings to nonlinguistic aspects of culture; language change; psycholinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**483**	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	**485**	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**489**	Doing Research in Anthropology	Research process learned through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing Rotating topics. May be repeated for credit.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 credit hours; Students who have credit for PUP 490 may not enroll in ASB 490
ASB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**501**	Applied Medical Anthropology	Overview of anthropology's applications in medicine and its adaptations to U.S. ethnic populations. Requires research project in medical setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**502**	Health of Ethnic Minorities	Prevalence of illness, risk factors, health ecology, and medical and indigenous treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**504**	Ethnic Relations	Structural processes of intergroup relations, methods for investigating psychocultural dimensions of ethnicity with focus upon U.S. ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**506**	Gender, Emotions, and Culture	Relationships among gender and emotion across cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**525**	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**529**	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**530**	Ecological Anthropology	Relations among the population dynamics, social organization, culture, and environment of human populations, with special emphasis on hunter-gatherers and extensive agriculturalists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**531**	Anthropology of Development	Theories of development and the human and environmental consequences of development, with particular emphasis on rural Southeast Asia.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**532**	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**533**	Sustainable Urban Dynamics.	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites:If fyou have received credit for SOS 532, you may not enroll in ASB 533. Graduate students only
ASB	**536**	Ethnohistory of Mesoamerica	Indigenous societies of southern Mexico and Guatemala at Spanish contact and their postconquest transformation. Emphasis on the Aztec Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**537**	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**540**	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	**541**	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**542**	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**543**	Method and Theory of Archaeology II	Covers concepts of social complexity along with economy, demography, and social dynamics, followed by archaeological research design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**544**	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**546**	Pleistocene Prehistory	Development of society and culture in the Old World during the Pleistocene epoch, emphasizing technological change through time and the relationship of people to their environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**547**	Issues in Old World Domestication Economies	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**549**	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**550**	Economic Archaeology	Prehistoric economies in hunter-gatherer, tribal, and complex societies. Covers subsistence strategies, craft production and specialization, and exchange.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**551**	Prehistoric Diet	Critical review of techniques for recovering dietary information and theoretical models concerned with explaining diet and nutrition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**555**	Complex Societies	Examines structural variations in hierarchically organized societies, along with origins, dynamics, and collapse.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**558**	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**559**	Archaeology and the Ideational Realm	Postprocessual and other views concerning relevance of mental phenomena for understanding sociocultural change. Various approaches to inferring prehistoric meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**560**	Archaeology of the Social Realm.	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**563**	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**567**	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**568**	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**570**	Immigration to the U.S.	Covers some of the major topics and issues in immigration studies with a focus on the United States. Uses both theoretical works dealing with the causes and consequences of international migration and ethnographic accounts of actual immigrant lives. Broadly interdisciplinary and incorporates perspectives from sociology, political science, economics, and other fields; emphasizes anthropological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**571**	Museum Principles	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**572**	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**573**	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**574**	Exhibition Planning and Design	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**575**	Computers and Museums	Basics of museum computer application; hardware and software; fundamentals of database management; issues of research, collections management, and administration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**576**	Museum Interpretation	Processes of planning, implementing, documenting, and evaluating educational programs in museums for varied audience--children, adults, and special interest groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**577**	Principles of Conservation	Preservation of museum objects: nature of materials, environmental controls, and causes of degradation; recognizing problems, damage, and solutions; proper care of objects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**579**	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(HU or SB) & G	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
ASB	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
ASB	**340**	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic, and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**346**	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
ASB	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**440**	Women in the Global Factory	Examines the impact of Third World women's incorporation into the new global division of labor in the late 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**441**	Sexuality and Culture	Uses a global, comparative approach to examine the cultural and historical construction of sexualities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**442**	Urban Anthropology	Issues in understanding urban culture and social space from interdisciplinary anthropological perspective. May involve fieldwork. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		

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ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
ASB	**202**	Immigration and Ethnic Relations in the U.S.	Processes of intercultural relations; systems approach to history of U.S. interethnic relations; psychocultural analysis of contemporary U.S. ethnic relations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-4	(HU or SB) & G	
ASC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**301**	Contextual Uses of Algebra in Technology	Uses algebra to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: Polytechnic BAS student
ASC	**302**	Contextual Uses of Geometry in Technology	Uses geometrical concepts to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**303**	Contextual Uses of Trigonometry in Technology	Topics for close examination in selected dramatic and/or nondramatic works. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		
ASC	**315**	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	
ASC	**325**	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ASC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Polytechnic BAS student
ASE	**549**	Stat Applicatns Engr		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Arizona State University	3.		
ASE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		

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ASE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
ASE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
ASE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
ASE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASM	**104**	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SB or SG	
ASM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	**246**	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**275**	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASM	**301**	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites:ASM 104 with a grade of D or better
ASM	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASB 222
ASM	**338**	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		
ASM	**341**	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104
ASM	**342**	Human Biological Variation	Evolutionary interpretations of biological variation in living human populations, with emphasis on anthropological genetics and adaptation. Nutrition and disease and their relation to genetics and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	
ASM	**344**	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	H	Pre-requisites:ASM 104 with a grade of D or better

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ASM	**345**	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104, or BIO 100, or BIO 181 (or BIO 188), or BIO 182 (or BIO 187), with a D or better
ASM	**348**	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**365**	Laboratory Methods in Archaeology	Techniques of artifact analysis. Basic archaeological research techniques; methods of report writing. May be repeated for credit for total of 8 hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104 with a D or better
ASM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 (or SSH 100) and ASM 104 with a D or better
ASM	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for SSH 414, or SOS 414, may not enroll in ASM 414; Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
ASM	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in SOS 424 or BIO 424, may not enroll in ASM 424
ASM	**435**	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**443**	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
ASM	**448**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with a grade of D or better
ASM	**450**	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 104
ASM	**452**	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	**454**	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ASM	**455**	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisite: ASM 343
ASM	**456**	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 345
ASM	**459**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 341 and 275 with a D or better. Students who have credit for ASM 559, may not enroll in ASM 459
ASM	**460**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	**465**	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	
ASM	**472**	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASM	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student

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ASM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6.		Pre-requisites: May earn credit for BIO 506, ASM 506 or MCB 506 only. Graduste student only.
ASM	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**525**	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**530**	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**543**	Primatology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**548**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**552**	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate students only. Students who have credit for ASM 452, may not enroll in ASM 552
ASM	**555**	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	**559**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 459 or 559
ASM	**560**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**565**	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**566**	Advanced Topics in Quantitative Archaeology	Archaeological issues associated with quantitative analysis, e.g., Bayesian and Monte Carlo approaches, simulation, diversity. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 565 with a D or better. Graduate student only
ASM	**568**	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**573**	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**611**	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		

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ASM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ASM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ASM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
AST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**321**	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**322**	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	Pre-requisites: MAT 270 (or MAT 265), PHY 150 (or PHY 121/122) with C or better
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		

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AST	**421**	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**422**	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**492**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Pre-requisites: Must be an Honors student
AST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**521**	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**522**	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**523**	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**531**	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**532-M**	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**533**	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**591-M**	Seminar		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

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AST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
AST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre- or Co-requisites: AST 112 or AST 322 (with or better if completed)
AST	**301**	Discovering the Sun and Its Planets	Comprehensive course in astronomy for non-science majors. Course will include lectures, written assignments, and hands-on work. Not open to students with credit in AST 111 (available at the Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
AST	**302**	Modern Astronomy	Comprehensive course in astronomy for non-science majors. Covers achievements and controversies of 20th century astronomy through lectures, written assignments, and hands-on work. Not open to students with credit in AST 112 (available at Tempe campus) or its equivalent.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
ASU	**101-HNR**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1.		Pre-requisite: Barrett Honors student
ASU	**101-CPP**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Public Programs	College of Public Programs	1.		Pre-requisite: College of Public Programs student
ASU	**101-CTI**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Tech & Innovation	Dean, College of Technology and Innovation	1.		Prerequisite(s): College of Technology and Innovation student
ASU	**101-CS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Cronkite School of Journalism and Mass Communication student
ASU	**101-HDA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		Pre-requisite: Herberger Institute of Design and the Arts student
ASU	**101-FSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisite: Fulton School of Engineering student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	**101-LA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1.		Pre-requisite: College of Liberal Arts & Sciences student
ASU	**101-TE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Teacher Education and Leadership student
ASU	**101-NCIAS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: New College of Interdisciplinary Arts & Sciences student
ASU	**101-NU**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing & Healthcare Innovation students only
ASU	**101-SOS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1.		Pre-requisite: School of Sustainability student
ASU	**101-UC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1.		Pre-requisite: University College student
ASU	**101-WPC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1.		Pre-requisite: W.P.Carey student
ATC	**230**	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ATC	**331**	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATC	**332**	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**333**	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Must have a C or better in AMT 201 and ATC 230, or be currently enrolled
ATC	**431**	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: ATC 331 with C or better
ATC	**432**	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:completed ATC 332 with C or better
ATC	**433**	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Completed ATC 333 with C or better
ATC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ATC	**491**	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: ATC 331 and ATC 332
ATE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**361**	Building Structures I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisite: ADE 321
ATE	**362**	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 361 with C or better
ATE	**451**	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 421
ATE	**452**	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ATE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ATE	**521**	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**550**	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**553**	Building Systems III	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisite: ADE 521; ATE 563
ATE	**556**	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 522 and APH 505
ATE	**557**	Construction Documents	Production of architectural working drawings; legal status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**560**	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**562**	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**563**	Building Structures III	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ATE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**582**	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ATE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AVC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**301**	Architectural Communication	Communication skills for architecture studios. Emphasis on graphics, drawing conventions, media, computer-aided design, design of presentations, and oral presentations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		
AVC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AVC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AVC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AVC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AVC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AVC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**461**	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms. Credit is allowed for only BCH 461 or 361.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; Co-requisites: CHM 341 or CHM 346 (with C or better if completed)
BCH	**462**	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: BCH 461 with C or better
BCH	**463**	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 341 or CHM 346 with C or better
BCH	**464**	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre-requisites: BCH 467 with a grade of C or better; Pre-or-Co-requisite: BCH 463 (with a grade of C or better if completed)
BCH	**465**	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 462 with a C or better
BCH	**467**	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		
BCH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
BCH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		

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BCH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**501**	Current Topics in Biochemistry	May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
BCH	**561**	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**568**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
BCH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 353 (or LSC 353) with C or better; CHM 231 or CHM 234 or CHM 334 with C or better; Credit is allowed for only BCH 361 or 461 (or LSC 366)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCS	**101**	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
BCS	**102**	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 101 with a grade of D or better, or currently enrolled
BCS	**201**	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 102 with a grade of D or better, or currently enrolled
BCS	**202**	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 202 with a grade of D or better or currently enrolled
BCS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	**495**	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		

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BDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
BDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**701**	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Graduate College	Graduate College	9.		
BDE	**702**	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**721**	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**722**	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Graduate College	Graduate College	3.		
BDE	**751**	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Graduate College	Graduate College	1.		
BDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
BDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		
BDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Graduate College	Graduate College	1-15		
BE	**333**	Issues in Teaching		Y	LEC	Y	CNV	Institute & Grad Sch Education	Dean, W.P. Carey School of Business	3.		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	

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BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites:with a C or better: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245, or both PLB 200 and PLB 201)
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 480 with C or better
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**189**	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
BIO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	Pre-requisites:BIO 201 with a grade of D or better
BIO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**302**	Cancer and Heart Disease	Incidence and mortality statistics for cancer and heart disease; host and environmental risk factors; diagnosis, treatment and prevention strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with a C or better
BIO	**303**	Radiation and Life	Benefits and risks of radiation exposure in society; medical applications, food irradiation, nuclear power, solar UV, population health effects. Cannot be counted toward a biology major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with C or better
BIO	**304**	Radiation Medicine and Biology	Uses of radiation in medicine, including CT, diagnostic x rays, MRI, nuclear medicine, ultrasound; biological effects of radiation with emphasis on cancer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 188 with a grade of C or better
BIO	**310**	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**311**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with a C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201). Students with credit for HPS 340, may not enroll in BIO 311
BIO	**312**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	

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BIO	**314**	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: BS Biology and Society Concentration majors; BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**315**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	**316**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	
BIO	**318**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
BIO	**319**	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**321**	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre/Co-requisites: BIO 320 with C or better if completed
BIO	**322**	Conservation Biology and Ecological Sustainability I	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201)
BIO	**323**	Conservation Biology and Ecological Sustainability II	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**324**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	
BIO	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only GLG 325 or BIO 325
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites:with a C or better: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245, or both PLB 200 and PLB 201)
BIO	**342**	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites:BIO 340 or BIO 341 with a D grade or better, or be co-enrolled in either BIO 340 or BIO 341
BIO	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisite: MBB 247 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	**344**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; CHM 113 and CHM 116 with C or better
BIO	**346**	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 187 and BIO 188 completed with a D or greater or currently enrolled
BIO	**352**	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**361**	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**386**	General Entomology	Form, activities, and classification of insects. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or better

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BIO	**390**	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**402**	Service Learning	Provides academic enrichment and mentoring to economically disadvantaged children; related to course work in biology; requires weekly reflective reading and writing.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	
BIO	**406**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 406 or PLB 432
BIO	**410**	Techniques in Wildlife Conservation Biology	Field and analytical techniques used to evaluate wildlife populations, their structure, viability, and environmental impacts. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320, BIO 322, and BIO 323 with C or better
BIO	**411**	Quantitative Conservation Biology	Principles of conservation science; demography and extinction risk; practical approaches to conserving small, declining, and exploited populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320, BIO 322 and BIO 323 with "C" or better
BIO	**412**	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	**414**	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisites: BIO 314 with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**416**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
BIO	**417**	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 415 with C or better
BIO	**421**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: You may not enroll in BIO 421 if you have credit for BIO 521; must have BIO 320 with a grade of C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	**426**	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	**427**	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**428**	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320 with C or better
BIO	**431**	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or better
BIO	**435**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite:BIO 331 with a grade of C or better
BIO	**436**	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 331 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit only for MBB 440 or BIO 440
BIO	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites:Completed BIO 340 or ASM 301 with a C or better; If you have credit in ASM 446, you may not enroll in BIO 446
BIO	**450**	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 351 with C or better
BIO	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**455**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		

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BIO	**456**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BIO	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better. Credit is allowed for only AST 460, BIO 460, GLG 460 or MIC 475
BIO	**461**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**462**	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**464**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 464 or PLB 440
BIO	**465**	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**466**	Neurophysiology Laboratory	Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 465 or BIO 467 (with C or better if completed)
BIO	**467**	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**469**	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 360 with C or better
BIO	**470**	Systematic Zoology	Philosophy, theory, practice of interpreting animal diversity, including species concepts, speciation, nomenclature, and evolutionary and phylogenetic classification emphasizing phylogenetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: C grade or better in BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201)
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**472**	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 480 with C or better
BIO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**490**	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 390 with C or better
BIO	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**495**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
BIO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**502**	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**505**	Scanning Electron Microscopy	Theory, use, and methods of preparing biological materials for scanning electron microscopy. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506

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BIO	**508**	Scientific Data Presentation	Techniques necessary for presentation of scientific data used in journal publications, grant proposals, and visual presentations. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**515**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
BIO	**516**	Foundations of Bioethics	Advanced introduction to the theoretical and normative foundations of the field of bioethics. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**520**	Biology of the Desert	Factors affecting plant and animal life in the desert regions and adaptations of the organisms to these factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
BIO	**521**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		You may not enroll in BIO 521 if you have credit for BIO 421
BIO	**522**	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**524**	Ecosystems	Structure and function of terrestrial and aquatic ecosystems, with emphasis on productivity, energetics, biogeochemical cycling, and systems integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**526**	Quantitative Ecology	Sampling strategies, spatial pattern analysis, species diversity, classification, and applications of multivariate techniques to ecology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**529**	Advanced Limnology	Recent literature, developments, methods, and limnological theory; field and lab application to some particular topic in limnology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**543**	Molecular Genetics	Nature and function of the gene; emphasis on the molecular basis of inheritance and gene expression in procaryotes and eucaryotes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**545**	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**547**	Techniques in Evolutionary Genetics	Practical experience in modern techniques for the study of evolution.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
BIO	**550**	Advanced Cell Biology	Applies contemporary electron microscopic and biochemical/molecular techniques for studying eukaryotic cell functions. Mechanisms of intracellular protein trafficking.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**551**	Biomembranes	Structure and function of biological membranes, emphasizing synthesis, fluidity, exocytosis, endocytosis, and cell responses to hormones and neurotransmitters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**552**	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**561**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**563**	Environmental Physiology	Physiological responses and adaptations of animals to various aspects of the physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**564**	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		

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BIO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**610**	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**611**	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: BIO 610 with D or better, or co-enrolled in BIO 610
BIO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		

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BIO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
BIO	**300**	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG	
BIO	**301**	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. fee Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	**305**	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	Pre-requisites: Minimum Sophomore standing
BIO	**306**	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ENG101 or ENG 105 with C or better; BIO181 (or BIO188) and BIO182 (or BIO187) with C or better
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**332**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and qualification of animal behavior and interpretation of behavior within an evolutionary framework. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: BIO 331 or LSC 331 (with C or better if completed)
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; CHM 113 and CHM 116 with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**354**	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
BIO	**443**	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better

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BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**393**	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Life Sciences	1.		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**300**	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BIS in Organizational Studies student; Minimum Sophomore status; ENG 102, 105 or 108 with C or better; Credit is allowed for only BIS 300 or 394 (Introduction to Org Studies)
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**350**	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity. Prerequisites: sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & C	Pre-requisites: Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**370**	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better

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BIS	**470**	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; BIS 370 with D or better; senior status; completion of first-year composition
BIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
BIS	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
BIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
BLE	**511**	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**514**	Bilingual/Multicult-Spec Educ	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**515**	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**520**	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**524**	Secondary Sheltered ESL Content Teaching	Teaching and assessing ESL adolescents in the content areas with an emphasis on integrating language acquisition principles with content learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**526**	SEI for Elementary Schools	Prepares elementary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**527**	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**528**	Social Studies for Bilingual/ESLTeachers	Provides language and instructional methodologies and assessment strategies relevant to bilingual/multicultural students in social studies content delivered in Spanish and English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**529**	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
BLE	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**535**	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**537**	Language Structure Aquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Credit is allowed for only BLE 537 or LIN 510
BLE	**541**	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**543**	Bilingual Education Models	Bilingual education programs in other countries; analysis of political, social, economic, and educational implications; practice in planning bilingual education curricula. See also offerings under MCE, SED, SPE, and SPF.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**561**	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Latino/a and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	**510**	Foundations of Structured English Immersion	Prepares teachers for linguistically diverse classrooms, including Structured English Immersion knowledge to meet the Augmented Provisional SEI Endorsement: ELL Proficiency Standards, Assessment Objectives, Foundations of SEI and SEI strategies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**578**	Student Teaching in the Elementary School	Supervised teaching in the area of specialization. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**220**	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
BLE	**322**	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**324**	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**335**	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**396**	Field Experience I	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**397**	Field Experience II		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**400**	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**407**	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**408**	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**411**	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**412**	Mathematics Curriculum, Instruction and Assesment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**413**	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**414-W**	Bilingual/ESL Curriculum and Organization	ESL curriculum content and organization, including program model effectiveness, language assessment and language usage, special needs and parent involvement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**455**	Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings	Examines methods, classroom management strategies, and assessment techniques for social studies instruction in elementary BLE/ESL classes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**470**	Student Teaching Seminar	Concurrent course with the student teaching experience that provides support, content, and critical evaluation opportunities directly related to teaching practices.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**478**	Student Teaching in Diverse Language Classrooms	Student teaching in diverse language classrooms. Focuses on use of English language learning and bilingual strategies; integrates all previous course work. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**479**	Capstone Seminar in Bilingual/ESL Education	Reflective, experience-based integration of theory and practice; professional development for bilingual/ESL teachers.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**481**	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
BLE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student

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BLE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**496**	Field Experience III	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
BLE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BME	**100**	Introduction to Bioengineering	Introduces profession of bioengineering: bioengineering design process, teaming, computer models in bioengineering, communications skills, career planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Bioengineering and Pre-Med Engineering student; Pre/Co-requisite: ENG 101, 105, or 107 with C or better
BME	**111**	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisite: Engineering student
BME	**112**	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisite: Engineering student
BME	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**200**	Conservation Principles in Bioengineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: CHM 114 or CHM 116 completed with C or better; PHY 131/132 with a C or better; :BIO 188(or BME 111/112) with a C or better; Co-requisite:MAT 275
BME	**202**	Global Awareness within Biomedical Engineering Design	Introduces ethical, legal, social, economic, and technical issues arising from the design and implementation of bioengineering technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L or HU	Pre-requisites: Engineering students OR have a minimum cumulative GPA of 2.50; ENG 102, 105 or 108 completed with a grade of C or greater or be currently enrolled; ECN 111 or ECN 112 AND either ECE 100, 106 or 194 completed with a grade of D or greater
BME	**235**	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering student; BIO 188 (or BME 111 and BME 112) with C or better, CHM 114 or CHM 116 with C or better; Pre/Co-requisite: PHY 131 and PHY 132.
BME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**300**	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE Junior, Senior or Post-Bac; BME 100 with C or better; ENG 102, 105 or 108 with C or better
BME	**318**	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 235 with a C or better
BME	**331**	Bioengineering Transport Phenomena	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 212, MAT 275 (or MAT 274), CHM 341, and BME 200 with C or better
BME	**350**	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS student; EEE 202 with C or better; MAT 274 or MAT 275 with C or better; Pre/Co-requisite: MAT 343
BME	**370**	Microcomputer Applications in Bioengineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 235 with C or better; BME 350 with a C or better
BME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**411**	Biomedical Engineering I	Reviews diagnostic and prosthetic methods using engineering methodology. Introduces transport, metabolic, and autoregulatory processes in the human body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum GPA of 2.50; BME 334 with C or better

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BME	**412**	Biomedical Engineering II	Reviews electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement technology, cardiovascular and pulmonary fluid mechanics, and the application of mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS students; Minimum cumulative GPA of 2.50
BME	**413**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; BME 370, BME 235 with C or better
BME	**415**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.0; MAT 274 with a D or better or currently enrolled; PHY 116 or PHY 131 with a D or better or currently enrolled in PHY 131 OR Graduate Engineering student
BME	**416**	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	**417**	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.	L	Pre-requisite: BME 318; BME 331; BME 370; IEE 380; BME 300 with C or better; Pre/Co-requisite: BME 413
BME	**419**	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 350 and BME 370 with C or better
BME	**423**	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.	L	Pre-requisites: BS/BSE Engineering, pre-requisite or co-requisite:BME 413
BME	**434**	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 331 with C or better
BME	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**490**	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 417with C or better
BME	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Pre-requisites: Must be an Honors student
BME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7		Pre-requisite: Bioengineering or Pre-Med Engineering BS or BSE student
BME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**511**	Biomedical Engineering I	Diagnostic and prosthetic methods using engineering methodology. Transport, metabolic, and autoregulatory processes in the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**512**	Biomedical Engineering II	Electrophysiology and nerve pacing applications. Introduces biomechanics and joint/limb replacement, technology, cardiovascular and pulmonary fluid mechanics, and mathematical modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**513**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**514**	Advanced Biomedical Instrumentation	Principles of applied biophysical measurements using bioelectric and radiological approach.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**515**	Biomedical Transport Processes	Principles of momentum, heat, and mass transport with applications to medical and biological systems and medical device design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only

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BME	**516**	Topics in Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**518**	Introduction to Biomaterials	Topics include structure property relationships for synthetic and natural biomaterials, biocompatibility, and uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**519**	Topics in Biocontrol Systems	Linear and nonlinear control systems analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body, including in-depth project.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate Engineering students only
BME	**520**	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**521**	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**522**	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**523**	Physiological Instrumentation Lab	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate Engineering students only
BME	**524**	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**525**	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Graduate Engineering students only
BME	**532**	Prosthetic and Rehabilitation Engineering	Analysis and critical assessment of design and control strategies for state-of-the-art medical devices used in rehabilitation engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**551**	Movement Biomechanics	Mechanics applied to the analysis and modeling of physiological movements. Computational modeling of muscles, tendons, joints, and the skeletal system with application to sports and rehabilitation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**566**	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy, and research. Lab experiments using diagnostic radiology, fluoroscopy, ultrasound, and CAT scanning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**568**	Medical Imaging	CT, SPECT, PET, and MRI. 3-D in vivo measurements. Instrument design, physiological modeling, clinical protocols, reconstruction algorithms, and quantitation issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		
BME	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		
BME	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		
BME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		
BMI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**501**	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**502**	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**505**	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 502 with a C or better; admission to a graduate program in the School of Computing and Informatics
BMI	**511**	Decision Support and Evidence-Based Practice	Biomedical decision making and the tools and techniques for decision support, including artificial intelligence and machine learning techniques.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		
BMI	**515**	Advanced Biostatistical Methods	Understanding biomedical data; how to use statistical methods and software to correctly analyze biomedical data.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**516**	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**520**	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 505 and BMI 516 with C or better, and admission to any SCI graduate program
BMI	**540**	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI 501 with C or better, and admission to any SCI graduate program
BMI	**541**	Cognition and Decision Making in Healthcare	Conceptual and methodological issues in cognitive science and medical informatics, including design and use of technology in medical settings.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**555**	Medical Information Management	Database theory and information management systems with applications to biomedical domain, including use of databases in the Web context.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: CSE 412 with D or better, and admission to any SCI graduate program

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BMI	**560**	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1.		Pre-requisite: Biomedical Informatics PhD student
BMI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	GNA	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Admission to any SCI graduate program
BMI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		
BMI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Graduate College	Biomedical Informatics Program	1.		
BMI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-4		Pre-requisites: Admission to any SCI graduate program
BMI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		
BMI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-15		
BMI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Biomedical Informatics Program	1-15		
BMI	**101**	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**102**	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 101 with B or better

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BMI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BMI	**201**	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GRD	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**211**	Modeling Biomedical Decisions	First semester of a three-emester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**221**	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**301**	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**311**	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**312**	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**330**	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**332**	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**461**	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**462**	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		

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BMI	**465**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**466**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BMI	**482**	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**483**	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 482 with C or better
BMI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BUA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**300**	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	1.		
BUA	**330**	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		
BUA	**380**	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**381**	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.
BUA	**382**	Small Business Sales and Market Development	Building and maintaining customers, developing a market identity and a niche, and the importance of sales.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with min 2.00 ASU Cum GPA, OR Graduate student; must not have previously earned credit in MKT 395.
BUA	**383**	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**384**	Small Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**440**	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 441 with a C or better.
BUA	**441**	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 440 with a C or better.
BUA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Faculty of Business Administration	1-6	L	Pre-requisites: Must be an Honors student
BUA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-7		
BUA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-12		
BUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
BUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

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BUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**502**	Organization and Management of Cooperative Programs	Work-study programs for business occupations in high schools and community colleges.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BUE	**480**	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**481**	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
BUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		
BUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
BUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
BUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
CBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	**520**	Modeling and Computational Biology	Key mathematical and computational techniques for bioinformatics. Numerical and visualization software; scripting, database management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**521**	Applications and Complex Problem Solving in Computational Biology	Continuation of CBS 520. Key mathematical concepts. Team solution of bioinformatics applications, project writing, and presentation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisite: CBS 520 with B or better

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CBS	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		
CBS	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
CBS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
CBS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
CBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
CCS	**300**	Chicana and Chicano Culture and Society	Intensive analysis of how Mexican American writers, artists, film makers, entertainers, and academicians have interpreted aspects of the Chicana and Chicano experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
CCS	**446**	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of Chicana and Chicano Studies content into elementary and secondary curriculum; designed for teachers who work with Chicana and Chicano students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
CDE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
CDE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**338**	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	2-4		
CDE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**430**	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
CDE	**437**	Infant Family Assessment and Observation	Examines strategies for implementing developmental assessments and observations of young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
CDE	**444**	Risk and Variation in Child Development	Impact that constitutional and environmental risk factors have on young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
CDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
CDE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
CDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
CDE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**531**	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**533**	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**534**	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: CDE 531; FAS 500
CDE	**570**	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**571**	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**572**	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**573**	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**574**	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**575**	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**576**	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		

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CDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**610**	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**612**	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: CDE 531 with C or better
CDE	**634**	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Prerequisite: CDE 534
CDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
CDE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	THE	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
CDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
CED	**111**	Exploration of Education	Education as an instrument in the development of the individual and society, and its significance as an American institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
CED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**250**	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
CED	**294**	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
CED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
CED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**512**	Introduction to Helping Relationships	Introduces the skills used in the helping professions and examines the settings in which they occur.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**522**	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**523**	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**525**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COE 501
CED	**527**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**528**	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CED	**534**	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**545**	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**567**	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**577**	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling Psychology MC or PhD student
CED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		

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CED	**655**	Student Development Programs in Higher Education	Emerging conceptual models of student development. Overview of student personnel and student affairs programs in community colleges, four-year colleges, and universities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: must be a graduate student (non-degree or degree seeking)
CED	**672**	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	**100**	Introduction to Civil and Environmental Engineering	Introduces basics of civil and environmental engineering design, team work, ethics, communication and management skills, modeling, problem solving, computer applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		Pre-requisites: Civil Engineering students only
CEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**210**	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better
CEE	**212**	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 and MAT 275 (or MAT 274) completed with C or better
CEE	**213**	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 (or CEE 211) with C or better; MAT 274 (or MAT 275) with C or better
CEE	**281**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		

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CEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**300**	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	L	Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**312**	Engrg Materials		N	LEC	N	CNV	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		
CEE	**321**	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) with C or better; CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	**341**	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211) and CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (C or better if completed)
CEE	**351**	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**353**	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**361**	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 213 with a C or better; CHM 114 or CHM 116 with a D or better; Pre- or Co-requisite: IEE 380 with D or better if completed
CEE	**372**	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	CS	Pre-requisites: Engineering BSE students; MAT 274 or MAT 275 & MAT 267 or MAT 272 (grade of C or better); MAT 267 or MAT 272 may be taken as a co-requisite. Credit for only CEE 384 or MAE 384
CEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**400**	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	(L or HU) & H	Pre-requisites: Civil and Environmental Engineering BS or BSE student; CEE 300 with C or better OR Non-CEE Juniors or Seniors
CEE	**412**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 412 or 511.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; completed CEE 351 and CEE 353 with a grade of C or greater
CEE	**420**	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**421**	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**423**	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	**432**	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	**440**	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Engineering BS/BSE student; CEE 341 or MAE 340 with C or better
CEE	**441**	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	**452**	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 with C or better
CEE	**462**	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	**466**	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	**467**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 467 or 567. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or MIC 220 with a grade of C or greater
CEE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or CHE 334 with a C or greater

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CEE	**474**	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	**475**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	**481**	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better
CEE	**483**	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**486**	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.	L	Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 321 and CEE 341 and CEE 351 and CEE 361 and CEE 372 with a grade of C or better
CEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Pre-requisites: Honors students only
CEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisites: Engineering Honors students only
CEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**511**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 511 or 412.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Graduate Civil Engineering students only
CEE	**512**	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**513**	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**514**	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**515**	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate tudent
CEE	**516**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**521**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**522**	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student

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CEE	**524**	Advanced Steel Structures	Strength properties of steel and their effects on structural behavior. Elastic design of steel structures. Plastic analysis and design of beams, frames, and bents. Plastic deflections. Plastic design requirements. Multistory buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**526**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisite: Engineering CEE Graduate student
CEE	**527**	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**530**	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**532**	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	**533**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**536**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**537**	Topics in Structural Engineering	Advanced topics, including nonlinear structural analysis, experimental stress analysis, advanced finite elements, plasticity and viscoelesticity, composites, and damage mechanics.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisites: Engineering CEE Graduate Students Only
CEE	**540**	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**541**	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**543**	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**544**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		You may not enroll in CEE 544 if you have credit in SOS 551
CEE	**546**	Free Surface Hydraulics	Derivation of 1-D equations used in open channel flow analysis; computations for uniform and nonuniform flows, unsteady flow, and flood routing. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**547**	Principles of River Engineering	Uses of rivers, study of watershed, and channel processes. Sediment sources, yield, and control; hydrologic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**548**	Sedimentation Engineering	Introduces the transportation of granular sedimentary materials by moving fluids. Degradation, aggregation, and local scour in alluvial channels. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**550**	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**551**	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**553**	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**554**	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**555**	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**556**	Seepage and Earth Dams	Transient and steady-state fluid flow through soil, confined and unconfined flow, pore water pressures, and application to earth dams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only

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CEE	**557**	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**558**	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**559**	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**560**	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**561**	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**562**	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**563**	Environmental Chemistry Laboratory	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**564**	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**566**	Industrial/Hazardous Waste Treatment	Emphasizes treatment of local industrial/hazardous waste problems, including solvent recovery and metals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**567**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 567 or 467.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**568**	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CEE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**573**	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**574**	Highway Capacity	Highway capacity for all functional classes of highways. Traffic signalization, including traffic studies, warrants, cycle length, timing, phasing, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**576**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**581**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	**582**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student

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CEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering MS or MSE student
CEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering PhD student
CEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CHE	**100**	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2.		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**211**	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHM 116 with C or better; MAT 266 or MAT 271 with C or better
CHE	**231**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 231 or 501.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHE 211 with C or better; MAT 266 or MAT 271 with a C or better
CHE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only

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CHE	**334**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 334 or 502.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 231 or 331 with C or better
CHE	**342**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 342 or 504.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 211 or CHE 311 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed) Credit allowed for only CHE 342 or CHE 504
CHE	**352**	Transport Laboratories	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: BS/BSE Engineering students
CHE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**432**	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with a C or better OR Graduate Engineering student
CHE	**433**	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with C or better
CHE	**442**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 442 or 505.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE students; CHE 334 and CHE 342 with a C or better OR Graduate Engineering students
CHE	**451**	Chemical Engineering Laboratory	Operation, control, and design of experimental and industrial process equipment; independent research projects. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 334 with C or better; CHE 342 with C or better; MAE 384 (or ECE 384) with C or better OR Graduate Engineering students
CHE	**458**	Semiconductor Material Processing	Introduces the processing and characterization of electronic materials for semiconductor applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE student; CHE 334 and CHE 342 with C or better OR Graduate Engineering student
CHE	**461**	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	CS	Pre-requisites: Engineering BS or BSE student; MAT 274 or MAT 275 with C or better; MAE 384 or CEE 384 with a C or better OR Graduate Engineering student
CHE	**462**	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; CHE 432, CHE 442 and CHE 433 with C or better OR Graduate Engineering student
CHE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 469 or 569.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**474**	Chemical Engineering Design for the Environment	Conflict of processing materials and preserving the natural resources. Teaches students to understand and value the environment and attempt to control our impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 334 and CHE 342 with a grade of C or better
CHE	**475**	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisite: Engineering BSE student
CHE	**476**	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**477**	Bioseparation Processes	Principles of separation of biologically active chemicals; the application, scale-up, and design of separation processes in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with a minimum GPA of 3.00 OR Graduate Engineering student
CHE	**478**	Industrial Water Quality Engineering	Chemical treatment processing, quality criteria and control, system design, and water pollutants.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; Must have completed CHE 231 or CHE 331 with a grade of C or greater; Seniors only
CHE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**490**	Chemical Engineering Projects	Individual projects in chemical engineering operations and design.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-5		Pre-requisite: Engineering BSE student
CHE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Pre-requisites: Honors students only
CHE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**501**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 501 or 231.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**502**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 502 or 334.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**504**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 504 or 342.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Students who have credit for CHE 342, may not enroll in CHE 504
CHE	**505**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 505 or 442.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in MSE 518, EEE 518, or MSE 475 you may not enroll in CHE 518
CHE	**527**	Advanced Applied Mathematical Analysis in Chemical Engineering	Formulation and solution of complex mathematical relationships resulting from the description of physical problems in mass, energy, and momentum transfer and chemical kinetics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**536**	Convective Mass Transfer	Turbulent flow for multicomponent systems, including chemical reactions with applications in separations and air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**552**	Industrial Water Quality Engineering	Water pollutants, quality criteria and control, chemical treatment processing, and system design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**553**	Air Quality Control	Air pollutant origins, effects, and control. Physical and chemical processes, including dispersion, combustion, sampling, control equipment design, and special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**561**	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		
CHE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	**101**	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
CHI	**102**	First-Year Chinese II	See CHI 101. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:Must have completed CHI 101 with a grade of D or better or be currently enrolled
CHI	**120**	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	
CHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**201**	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 102 with a grade of D or better or currently enrolled
CHI	**202**	Second-Year Chinese II	See CHI 201. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 201 with a grade of D or better or currenlty enrolled
CHI	**205**	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**301**	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 202 with a grade of C or better or currently enrolled
CHI	**302**	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 301 with a grade of C or better or currently enrolled
CHI	**307**	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 302, or JPN 202, or KOR 202 with a grade of C or better or currently enrolled
CHI	**308**	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 307 with a grade of C or better, or currently enrolled

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CHI	**309**	Chinese Conversation	Aural/oral drills using contemporary stories, articles, and essays. For students with lower-level proficiency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:Must have completed CHI 202 with a grade of D or better or currently enrolled
CHI	**310**	Chinese Conversation	See CHI 309.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**311**	Chinese Conversation	Intensive aural/oral practice in modern Chinese. For students who have lived in China or a Chinese-speaking environment.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		
CHI	**312**	Chinese Conversation	See CHI 311.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**321**	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
CHI	**322**	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
CHI	**345**	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**380**	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**401**	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with C or better
CHI	**402**	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 401 with C or better
CHI	**407**	Chinese for Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 402 with a C or better
CHI	**408**	Chinese for Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 407 with C or better
CHI	**430**	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	**450**	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianti wen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 with a grade of C or better
CHI	**461**	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuanqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 and CHI 307 with a grade of C or better
CHI	**462**	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisties: CHI 302, and CHI 308
CHI	**470**	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with a grade of C or better
CHI	**482**	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites; CHI 302 and CHI 308
CHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
CHI	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**514**	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**520**	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, economics, or other fields.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**543**	Chinese Language and Linguistics	Analysis and discussion, within the framework of linguistic theory, of selected problems in Chinese phonetics, morphology, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**561**	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**585**	Problems of Translation	Theories and practice of translation: strategies for handling a variety of Chinese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**684**	Internship		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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CHI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
CHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better

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CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: Students who have credit for CHM 107, may not enroll in CHM 101
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ & G	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	
CHM	**111**	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisite: Biochemistry or Chemistry major; CHM 117 with C or better if completed
CHM	**112**	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre-requisites: Biochemistry or Chemistry major; CHM 111 with C or better; Pre/Co-requisite: CHM 118 with C or better if completed
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**114**	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better

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CHM	**117**	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: Chemistry or Biochemistry majors; CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre-or Co-requisite: MAT 170 (or 210, 251, 265 or 270 (with C or better if completed); Credit for CHM 113 or 117 only
CHM	**118**	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 117 with C or better; Chemistry and Biochemistry majors only
CHM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
CHM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**240**	Introduction to Physical Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	CS	Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**302**	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	**303**	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisites: CHM 325 with C or better if completed
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**333**	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds. Credit is allowed for only CHM 333 or 231 or 233.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Must be a Biochemistry or Chemistry student; CHM 116 or 118 with C or better
CHM	**334**	Organic Chemistry for Majors II	Continuation of CHM 333. Credit is allowed for only CHM 334 or 234.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Biochemistry or Chemistry student; CHM 333 with a C or better

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CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**337**	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions. Credit is allowed for only CHM 337 or 237. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; Pre- or Co-requisite: CHM 333 (with C or better if completed)
CHM	**338**	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337. Credit is allowed for only CHM 338 or 238. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; CHM 337 with C or better; Pre or Co-requisites: CHM 334
CHM	**341**	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114, 116 or 118 with C or better; CHM 231, 233 or 333 with C or better; MAT 210, 251, 265 or 270 with C or better; PHY 101, 112 or 131 with C or better.
CHM	**343**	Physical Chemistry Laboratory	Physical chemistry experiments. Credit is allowed for only CHM 343 or both CHM 348 and 349. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 341 with C or better or co-enrolled in CHM 341
CHM	**345**	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Prerequisites: CHM 240 with C or better or both MAT 272 and 274 with C or better
CHM	**346**	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 345 with C or better
CHM	**348**	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. fee. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	**349**	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**424**	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	**433**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	**434**	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 433 or CHM 531 with C or better
CHM	**435**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 361 (or BCH 461), BIO 353 and CHM 234 (or CHM 334) with a C or better; You may not enroll in CHM 435 if you have credit for CHM 535
CHM	**452**	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-2	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	**453**	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**460**	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	**471**	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341(or 346) or GLG 321 with C or better
CHM	**483**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student

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CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Barrett Honors College students only
CHM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**501**	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**521**	Chemometrics	Overview of chemometric tools in analytical chemistry, including multivariate calibration, spectral deconvolution, and experimental design.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**523**	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**524**	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**525**	Analytical Spectroscopy	Theoretical and practical considerations involving the use of optical instruments for chemical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		
CHM	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
CHM	**531**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 433 or CHM 531
CHM	**532**	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**535**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Students may not enroll in CHM 535 who have credit in CHM 435
CHM	**537**	Organic Reactions	Organic synthetic methodologies and important synthetic reactions emphasizing recently discovered reactions of preparative value. Protection/deprotection synthetic strategies; peptide synthesis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**541**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 541 or MSE 524
CHM	**543**	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry. Covers electronic structure methods and computer simulation techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM, NAN or PHY 544
CHM	**545**	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**546**	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**548**	Chemical Kinetics and Dynamics	Experimental and theoretical aspects of time-dependent processes in chemistry. Topics include kinetics of chemical reactions, diffusion, and relaxation phenomena in ordered and disordered materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**549**	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		

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CHM	**552**	Advanced Inorganic and Materials Synthesis Laboratory	Preparation and characterization of inorganic compounds and materials, emphasizing advanced methods and techniques of importance in inorganic and materials chemistry. Schlenk-line and glovebox manipulations, solvothermal syntheses, and gas-phase reactions.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		
CHM	**553**	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**571**	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**579**	Topics in Inorganic and Materials Chemistry		N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**582**	Topics in Geochemistry and Cosmochemistry	Topics of current interest for students in chemistry and other fields. Sampling of data and thought concerning phase equilibria, element distribution, meteorites, the Earth, and other planets.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		
CHM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**332**	General Organic Chemistry	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**336**	General Organic Chemistry Laboratory	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	Y	REC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	

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CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously. General Studies: SQ (if taken with CHM 108) & G	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ & G	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CHP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
CHP	**501**	Community Health Assessment and Analysis	Provides theory and practice in community assessment and analysis applicable to community health practice.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Nursing) or Nursing (Comm Health Adv Prac) student; CHP 500 with B or better; Co-requisite: NUR 581
CHP	**502**	Community Health Program Planning and Evaluation	Utilizes planning and evaluation theory in planning programs to meet identified health needs of communities.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Adv Prac) student; CHP 501 with B or better
CHP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
CIM	**105**	Introduction to the Concrete Industry	Overview of the history, career opportunities, job functions, and professional organizations in the concrete industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CIM	**106**	Fundamentals of Concrete: Properties and Testing	Examines effects of concrete-making materials on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: CIM 105 with C or better; Co-requisite: STP 226
CIM	**205**	Concrete Construction Methods	Forming, shoring, placing and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for foundations and other structural members.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 106 with C or better; CON 252
CIM	**206**	Application of Concrete in Construction	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 205 with C or better; CON 243 with C or better
CIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	**305**	Management of Concrete Products: Ordering and Delivering	Basic understanding of managing the order and delivery process common to all concrete products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better; CON 221 with C or better
CIM	**306**	Management of Concrete Products: Production Facilities	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 305 and CON 251 with C or better; CON 271
CIM	**405**	Concrete Problems: Diagnosis, Prevention, and Dispute	Diagnose and prevent problems related to concrete production, testing, construction, and performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better
CIM	**406**	Concrete Industry Management Capstone	Intensive study of a problem appropriate to the major and the student's career interests. Lecture, student presentations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS student; CIM 405 with C or better; COM 225
CIM	**420**	Senior Concrete Lab	Reintroduces fundamental lab procedures as well as advanced testing methods. Collect data, search for literature, analyze and report on conclusions.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Contruction BS student; CIM 405 with C or better
CIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIS	**105**	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	

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CIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	**220**	Programming Concepts for Accountancy Majors	Introduces business computer programming. Uses programming languages such as Visual BASIC to teach proper programming style and practice. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		
CIS	**235**	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	**236**	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	Pre-requisites: Must be an Honors student
CIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	**300**	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	**335**	Visual Paradigms for Information Systems Development	Uses visual programming languages such as Visual BASIC to implement data structures, file structures, and interfaces in business information systems. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey ACC BS student having completed CIS 220 OR CIS BS student having completed CSE 100, AND ACC 241 AND ECN 221 with a grade of C or greater
CIS	**340**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C#. Fee.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: Must be W. P. Carey CIS BS student; AND must have completed ACC 241 or ACC 271, CIS 235 or CIS 236, CSE 181 or CSE 182, and ECN 221 with a C or greater
CIS	**360**	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey Accountancy BS student, and CIS 105 or CIS 220 or 236, ACC 231 or 261, and ACC 241 or 271 with a grade of C or better; OR W. P. Carey Computer Information Systems BS student, and CIS 235 or 236 with a grade of C or better.
CIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
CIS	**425**	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 with C or better
CIS	**430**	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as.NET and networked UNIX. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360
CIS	**440**	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.	L	Pre-requisites: W.P. Carey Computer Information Systems BS student; CIS 360 and CIS 430 with C or better
CIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Pre-requisites: Must be an Honors student
CIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W.P. Carey ACC BS or CIS BS student
CIS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Pre-requisites: W.P. Carey CIS BS student
CIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student

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CIS	**502**	Information Systems	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: W.P.Carey MBA student
CIS	**505**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems, abstract data types and object-oriented programming using a visual language.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey graduate students only
CIS	**506**	Business Database Systems	Hierarchical, network, relational, and other recent data models for database systems. Processing issues such as concurrency control, query optimization, and distributed processing.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**512**	Intelligent Decision Systems and Knowledge Management	Definition, description, construction, and evaluation of computer-based decision systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**515**	Management Information Systems	Systems theory concepts applied to the collection, retention, and dissemination of information for management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**520**	Systems Design and Evaluation	Methodologies of systems analysis and design. Issues include project management, interface, organizational requirements, constraints, documentation, implementation, control, and performance evaluation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**530**	Information Systems Development	Object-oriented and interprocess communication and control concepts for information systems; applications based on languages such as C++ and platforms such as networked UNIX.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
CIS	**535**	Distributed and Mixed-Media Information Systems	Modern communications protocols for wireless and mobile computing, overview of network and distributed database management systems, overview of storage and multimedia delivery issues, and shared virtual reality technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		
CIS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		
CIS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		
CIS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		
CLS	**100**	Introduction to Clinical Laboratory Sciences	Introduces the field of clinical laboratory sciences. Required for Clinical Laboratory Sciences majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
CLS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CLS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
CLS	**310**	Principles of Clinical Chemistry I	Theory and application of principles of clinical chemistry, with emphasis on lab techniques, pathophysiology, methods of analysis, and assessment of procedure. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**320**	Principles of Clinical Microbiology I	Theory and application of principles of clinical microbiology with emphasis on isolation and identification of medically significant fungi and bacteria. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**330**	Principles of Clinical Hematology I/Body Fluids	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**410**	Principles of Clinical Chemistry II	Continuation of CLS 310 with emphasis on principles of advanced clinical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**411**	Advanced Applications of Clinical Chemistry	Clinical application of theory/techniques from CLS 310 and 410. Emphasizes operation of common lab instrumentation and clinical correlation. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**420**	Principles of Clinical Microbiology II	Disease mechanisms and identification of medically significant parasites, Mycobacteria, Actinomycetes, Chlamydia, Rickettsia, Mycoplasma, and viruses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**421**	Advanced Applications of Clinical Microbiology	Practical lab application of the principles of specimen collection, processing, detection, identification, and antimicrobial testing of medically significant bacteria, fungi, and parasites. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**430**	Principles of Clinical Hematology II/Hemostasis	Theory and applications of principles in hematology with emphasis on etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**431**	Advanced Applications of Clinical Hematology	Practical lab application of methods/techniques used to evaluate and diagnose blood dyscrasias/hemostatic defects. Applied techniques in body fluid analysis. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		

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CLS	**440**	Principles of Clinical Immunology/Immunohematology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**441**	Advanced Applications of Clinical Immunology/Immunohematology	Practical lab application of the principles of serological methods used in diagnosing disease and selecting blood components for transfusion therapy. Minimum 135 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**450**	Principles of Clinical Laboratory Administration	Principles of management, emphasizing the clinical lab. Basic management process, personnel supervision, identification, and allocation of resources. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	
CLS	**460**	Principles of Clinical Laboratory Education	Principles of learning, with application to the development of instructional objectives, strategies, and evaluation for teaching-learning situations in the lab. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	
CLS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
CMN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
CMN	**502**	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**505**	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**506**	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**515**	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**516**	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**520**	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**522**	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**531**	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**532**	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**550**	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**551**	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**557**	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**565**	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**570**	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not adressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
CMN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		

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CMN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: Communication Studies Master of Arts student
CMN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisite: Communication Studies Master of Arts student
CMN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
COE	**501**	Introduction to Research and Evaluaton in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
COE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
COE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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COE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**271**	Voice Improvement	Intensive personal and group experience to improve normal vocal usage, including articulation and pronunciation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**281**	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**298**	Honors Directed Study		N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honor student
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C	Pre-requisite: Minimum 2.50 GPA

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COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**323**	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	C	Pre-requisites: Must have a minimum cumulative GPA of 2.50; Must have completed COM 100 with a grade of C or greater
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**326**	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**341**	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**344**	Performance of Oral Traditions	Cultural beliefs and values studied through ethnographic research and performance of personal narratives, folklore, myths, legends, and other oral traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**404**	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**407**	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA of greater than or equal to 2.50; Must have completed COM 308 with a grade of C or greater
COM	**408**	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA greater than or equal to 2.50; Must have completed COM 308 with a C or better. Credit given for COM 408 or 508 only
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**426**	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**441**	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	**442**	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	**445**	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**446**	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications students only and have completed 56 or more hours; Minimum cumulative GPA of 2.50; COM 225 and COM 308 with a C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisites: Must have a minimum cumulative GPA of 2.50
COM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**501**	Research Methods in Communication	Critical analysis of systems of inquiry in communication, focusing on the identification of variables and approaches to conducting research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**504**	Theories and Models in Communication	Theory construction, metatheoretical concerns, models, construct definition, and comparative analysis of current theories in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**508**	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508
COM	**509**	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must be a Graduate Communications student
COM	**521**	Rhetorical Criticism of Public Discourse	History and significance of rhetorical theory and criticism in the analysis of public discourse.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**604**	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**607**	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**608**	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**609**	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		
COM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		

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COM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		
COM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**124**	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	C	
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-req 25 minimum hours
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**309**	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**324**	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**353**	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better

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COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**416**	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**417**	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**422**	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: Must be a Junior and have a GPA of 2.0 or greater, AND completed ENG 101 or 105 with a grade of C or greater
COM	**424**	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**429**	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**451**	Employee Participation Processes in Organizations	Communication principles and practices associated with employee empowerment, team-based organizing, and similar employee involvement processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 308 or COM 309 with C or better; minimum GPA of 2.0
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**454**	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**457**	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**471**	International Communication	Explores the political, economic, sociocultural, and communicative dimensions of mediated communication across borders and the processes of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	Pre-requisites: Minimum 2.0 GPA; CMN 463 or COM 463 with C or better
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Communication studies major or Public Relations and Strategic Communication minor students; minimum 56 hours; minimum cumulative GPA of 2.80; COM 225 (CMN 225) with C or better; COM 308 or COM 309 with C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COM 100 with C or better; minimum gpa of 2.50
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have a GPA of 2.50 or greater; Must have completed COM 100 with a grade of C or greater
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better

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COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
CON	**100**	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CON	**101**	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	HU & H & G	
CON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**221**	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: PHY 111 and PHY 113 and MAT 265 (or MAT 270) with C or better
CON	**223**	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 221 with C or better
CON	**241**	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**243**	Heavy Construction Equipment, Methods, and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**251**	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**252**	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**271**	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CON 252 with D or better; CON 243 with C or better
CON	**273**	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**296**	Field Internship	Participation as interns on construction projects to observe and experience the daily activities. fee	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Construction students only
CON	**301**	Megaprojects and Their Impacts on Society	World survey of construction megaprojects and their impacts on the environment, technology, local and global economies, and local culture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**302**	Construction Workforce Issues	Examines issues and forces that have shaped today's construction workforce, including relations among gender, racial, ethnic, and class groups.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering BS/BSE students and must have completed COM 225 with a grade of D or better or be currently enrolled
CON	**310**	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 221 with C or better; CON 223 with C or bettter
CON	**341**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**345**	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; PHY 111 (or PHY 121) with C or better; PHY 113 (or PHY 122) with C or better; CON 221 with C or better; CON 252

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CON	**377**	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	**383**	Construction Estimating	Analyzes construction drawings and specifications. Methods used in estimating process. Quantity surveying techniques for CSI divisions. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS or Housing & Urban Development BSD students; CON 243 and CON 221 with a C or better; CON 252 with a D or better
CON	**389**	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students; CON 221 with C or better; CON 251 with D or better
CON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	**424**	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering Construction BS students; CON 223 with C or better; Pre or Co-requisites: CON 310 (with C or better if completed)
CON	**446**	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: COM 225; CON 221 with C or better
CON	**450**	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS students only; Must have completed CON 310 with a grade of D or greater or be currently enrolled
CON	**453**	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 271, or CON 371; CON 383 with C or better; Co-requisite: CON 495
CON	**455**	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 495 and CON 453 with C or better
CON	**468**	Mechanical and Electrical Estimating	Analysis and organization of performing a cost estimate for both mechanical and electrical construction projects. Computer usage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 273; CON 345 and CON 383 with C or better
CON	**471**	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Prerequisite: Construction BS student; CON 453 with C or better
CON	**472**	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	**477**	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	**483**	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 383 with C or better
CON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Construction BS students; Must have completed CON296 with D or better or currently enrolled
CON	**486**	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites:Construction BS Student; Must have a C or better in CON 383
CON	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		
CON	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Pre-requisites: Must be an Honors student
CON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**495**	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students only; Must have completed CON 383 and CON 389 with a grade of C or better
CON	**496**	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisites Engineering CON BS students; Must have completed COM 225 with a D or better, and CON 453 with a C or better
CON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**501**	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student

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CON	**533**	Strategies of Estimating and Bidding	Explores advanced concepts of the estimating process, such as modeling and statistical analysis, to improve bid accuracies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction graduate student
CON	**540**	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**543**	Construction Equipment Engineering	Analyzes heavy construction equipment productivity using case studies. Applies engineering fundamentals to the planning, selection, and utilization of equipment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction MS students
CON	**545**	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**547**	Strategic Planning	Business planning process of the construction enterprise. Differences between publicly held and closely held businesses and their exposure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**551**	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**554**	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**561**	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering Graduate student
CON	**563**	Facility Management Fundamentals	Operations and maintenance, environmental issues, computerized management and maintenance systems, strategic planning, asset management, construction and design, and LEED/LEED-EB.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**565**	Information Measurement Theory I	Simplistic, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**567**	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**570**	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor¿s viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**571**	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 570 with C or better
CON	**575**	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**589**	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering MS, MSE or PHD student
CON	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1.		
CON	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Construction graduate student
CON	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**700**	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		
CON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CON	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**111**	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**211**	Game Development II	Introduces multiplayer games, artificial intelligence, and tile-based worlds using Macromedia Flash. Uses ActionScript tool to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate student or BIS student with Computer Gaming emphasis; CPI 111 with C or better
CPI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled

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CPI	**311**	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with a C or better
CPI	**321**	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with C or better
CPI	**360**	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 200 with C or better
CPI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**400**	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	**411**	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**412**	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with a C or better
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPI	**421**	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**422**	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems. Credit is allowed for only CPI 430 or ASB 430.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: CPI 200 with C or better; AML 100 or MAT 142, 170, 210, 265 or MAT 270 with C or better or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; Credit is allowed for only ASB 430, AML 330 or CPI 430
CPI	**441**	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 411, CPI 412, CPI 421, CPI 422 or DCI 451 with C or better
CPI	**470**	Application of Modeling and Visualization	Applies modeling, computing, and visualization techniques to real data; presents results in a meaningful visual environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1.		Pre-requisite: CPI 400
CPI	**480**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
CPI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1.		
CPI	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Pre-requisites: Must be an Honors student
CPI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		

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CPI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CPI 101 with D or better or currently enrolled
CPP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**613**	Child Counseling	Applies counseling theory in working with children in clinics and elementary schools. Integrated practicum available with instructor approval.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**622**	Group Counseling	Theories and methodologies used in group counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY622
CPY	**623**	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**634**	Organizational Development and Planned Change	Organizational/individual dynamics, including theory, analysis, techniques, and consultation/intervention strategies used in organizational development.	N	PRA	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Technology and Innovation or Fulton Engineering Graduate student
CPY	**644**	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577
CPY	**645**	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**650**	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 522
CPY	**651**	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 523
CPY	**660**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	**667**	Patterns of Behavior Disorders	Etiology and treatment of a variety of psychological problems, particularly those represented in DSM III-R.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre Requisites for CPY667
CPY	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668

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CPY	**670**	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**671**	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**672**	Human Diversity: Social Psychological Perspectives	Implications for psychological practice of social, psychological, and biological factors in the development of behavioral differences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**674**	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**675**	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	**676**	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**677**	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	**678**	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CPY	**679**	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**694**	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
CPY	**701**	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**702**	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: COE 502
CPY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	**610**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**620**	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
CRD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
CRD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-15		
CRD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-15		
CRJ	**100**	The Justice System	Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	
CRJ	**230**	Introduction to Policing	Introduces policing in the United States covering the history of police, contemporary police work, and problems in policing.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**240**	Introduction to Corrections	Introduces the structure and function of the corrections system from historical and contemporary perspectives.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**302**	Research Methods	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Also stresses methods for conducting research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Must have completed CRJ 100, or 301, JUS 100, or 105, or 305 with a grade of C or greater; or be currently enrolled in any one of these
CRJ	**303**	Statistical Analysis	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the administration of justice area.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	CS	Pre-requisites: MAT 114, 117, 119, 142, 170 or 210 with C or better; CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**304**	Criminology	Provides a basic overview of the nature, the causes and consequences, and the theories of criminal behavior.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**305**	Women, Crime, and Justice	Studies women as offenders, victims, and professionals in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**306**	Race, Ethnicity, and Justice	Studies minority issues in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**314**	Innovations in Policing	Examines current theories and research findings that guide police work, and the practical implications of evaluation within police departments.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better or currently enrolled; CRJ 230 (AJS 230) with C or better or currently enrolled
CRJ	**315**	Police Organization and Management	Provides a thorough understanding of the structure, processes, and behavior of police organizations.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better; CRJ 230 (AJS 230) with C or better
CRJ	**320**	The Adjudication Function	History and development of courts, trial by jury, and other dispute resolution mechanisms; selection and removal of judges and juries; organization, structure, and jurisdiction of courts; trial and nontrial processes of the judiciary.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:Must have completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or be currently enrolled, or co-enrolled in either of these courses
CRJ	**340**	Juvenile Justice	Critical examination of the history and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**350**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled, or co-enrolled in either of these courses
CRJ	**360**	Substantive Criminal Law	Criminal liability. Crimes against persons, property, and society. Governmental sanctions of individual conduct as formulated by legislatures and the courts.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed

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CRJ	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**410**	Procedural Criminal Law	The criminal process. Constitutional and legal problems associated with arrest, search and seizure, and due process of law.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled
CRJ	**420**	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater,
CRJ	**441**	Prevention of Crime and Delinquent Behavior	Theories of prevention, individual, group, and community approaches: intervention at appropriate stages; contemporary law enforcement, and corrections practices.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled.
CRJ	**442**	Community Relations in the Justice System	Focuses on developing an informed plan and policy for incorporating research findings about the surrounding community within various justice services and agencies. Topics include social stratification, minority groups, and victimology.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: AJS 100, CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**443**	Probation and Community Corrections	Examines the probation and parole functions as well as the numerous and diverse types of community corrections programs.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100,or 301,or CRJ 100,or 301,or JUS 100,or 105,or 305 with a C or greater or be currently enrolled in one;and completed AJS 240,or CRJ 240 with a C or greater or be currently enrolled in CRJ 240.
CRJ	**461**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: Junior or senior standing
CRJ	**462**	Gangs	Critical examination of the history and development of gangs, including criminal justice system responses to gangs and gang-related behaviors.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled in one of these.
CRJ	**463**	Occupational Crime	Overview of major issues in business, professional, and official rule violations. Includes consumer fraud, securities violations, unethical professionalism, and political corruption.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better
CRJ	**464**	Organized Crime	The nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled.
CRJ	**470**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	L or SB	Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or enrolled in; and completed ENG 101or 105 with a C or greater
CRJ	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		
CRJ	**485**	Student Assessment	Students may attend a mid-semester information session on the assessment process. At the end of the semester, students take part in a standardized examination and self-administered survey. Y/E grade only. Students must register for this class their final semester.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	0.		
CRJ	**492**	Honors Directed Study		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6		
CRJ	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6	L	Pre-requisites: Must be an Honors student
CRJ	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisites: Junior or Senior
CRJ	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-3		Pre-requisites: CRJ 100 with C or better; junior or senior standing
CRJ	**501**	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**502**	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**503**	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**504**	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**505**	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	**510**	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**511**	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**512**	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**513**	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**514**	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**515**	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**516**	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**517**	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**518**	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**519**	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**520**	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**521**	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**522**	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**524**	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**525**	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**534**	Program Evaluation in Criminal Justice	Covers methods of program evaluation, principles of research design, and evaluation tools and resources.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRJ	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Criminology and Criminal Justice	1.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**601**	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**602**	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**603**	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**604**	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**605**	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**606**	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**607**	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**608**	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**609**	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**610**	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**611**	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**612**	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**613**	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student

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CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**101**	Introduction to Computer Science and Engineering	Introduces topics in computer science and computer engineering; familiarization with CSE curriculum subdisciplines and topics. Design of computer software and systems, exploring and experimenting with systems, teamwork, professional opportunities, computer models and programming, communication. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	2.		
CSE	**110**	Principles of Programming with Java	Concepts of problem solving using Java, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**182**	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**183**	Success in Computer Science and Engineering Programs	Overview of the computer science and computer systems engineering fields as well as academic success tips for students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**205**	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	Pre-requisites: CSE 100 or 110 with C or better or currently enrolled
CSE	**220**	Programming for Computer Engineering	Introduces procedure programming languages (C/C++) and hardware descriptive language (VHDL). fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites:Computer Science & Engineer PRE or BSE; Must have received a C or greater in CSE 120 or EEE 120 AND CSE 205 or CSE 210
CSE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: CSE 120 or EEE 120 with C or better; CSE 100, CSE 110 or CSE 200 with C or better OR Computer Science & Engr Graduate student; Credit for CSE 230 or CSE 330 only
CSE	**240**	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: CSE 205 with C or better
CSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		
CSE	**301**	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Computer Science & Engineering BS/BSE student; CSE 205 with C or better
CSE	**310**	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engineering BSE, Computer Science BS, Computational Math Sciences BS or Biomedical Informatics BS student; CSE 205 with C or better; MAT 243 with C or better (CMS students may substitute MAT 300) or CSE Graduate students
CSE	**320**	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better; Credit for CSE 320 or CSE 422 only
CSE	**325**	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better or currently enrolled; CSE 230 or EEE 230 with C or better or currently enrolled; Credit for CSE 325 or CSE 421 only
CSE	**340**	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE Graduate students
CSE	**355**	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Syst Engr BSE or Computer Science BS students and have received a C or greater in CSE 310 OR CSE Graduate students
CSE	**360**	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS students and have received a C or greater in CSE 220 or CSE 240 OR CSE Graduate students; or BMI BS (ESBMIBS) students and have received a C or greater in CSE 310
CSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		

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CSE	**408**	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS students CSE 310 with C or better
CSE	**412**	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: - Computer Systems Engr BSE, Computer Science BS student, or Biomedical Informatics student; CSE 310 with a C or better
CSE	**414**	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 412 with a C or better or currently enrolled
CSE	**420**	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: BSE Computer Syst Engr or BS Computer Science students; CSE 230 or EEE 230 or CSE 330, and CSE 310 with C or better
CSE	**423**	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 320, 325, 360 with a C or better; May not enroll if received a C or better in CSE 461 or 485
CSE	**424**	Systems Capstone Project II	Continuation of capstone project started in CSE 423. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science or Computer Systems Engr BS or BSE students; Must have received a C or greater or be currently enrolled in CSE 423
CSE	**430**	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better; CSE 310 with a C or better OR Graduate CSE student
CSE	**432**	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering or Computer Science BS/BSE student; CSE 430 with C or better
CSE	**434**	Computer Networks	Distributed computing paradigms and technologies, distributed system architectures and design patterns, frameworks for development of distributed software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230, or CSE 330 and CSE310 with C or better
CSE	**438**	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 325 with C or better
CSE	**440**	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better
CSE	**445**	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 360 or be currently enrolled.
CSE	**450**	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**457**	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering or Computer Science - BS students and a grade of C or better in CSE 355 or be currently enrolled.
CSE	**459**	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 355 with a C or better or currently enrolled.
CSE	**460**	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 360 with a C or better or currently enrolled.
CSE	**461**	Software Engineering Project I	First of two-course software team-development sequence. Planning, management, design, and implementation using object-oriented technology, CASE tools, CMM-level-5 guidelines. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engineering or Computer Science BS student; Pre-or Co-requisite: CSE 460 (with C or better if completed); May not enroll in CSE 461 if received C or better in CSE 423 or CSE 485
CSE	**462**	Software Engineering Project II	Second of two-course software team-development sequence. Software evolution, maintenance, reengineering, reverse engineering, component-based development, and outsourcing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 461 with C or better
CSE	**463**	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 310 with a C or better or currently enrolled.
CSE	**465**	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Information Systems, Computer Systems Engineering BSE, Computer Science BS or Industrial Engineering BSE students and a grade of C or better in CIS 300 or CSE 360 or IEE 305 or currently enrolled

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CSE	**466**	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	**467**	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science or Computer Systems Engineering students; CSE 310 completed with a C or better
CSE	**468**	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 with C or better
CSE	**470**	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better or currently enrolled in CSE 310 AND a grade of D or better in MAT 342 or 343 or currently enrolled.
CSE	**471**	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 AND CSE 240 or be currently enrolled.
CSE	**476**	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**477**	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems & Engineering BSE or Computer Science BS students; MAT 343 (or MAT 342) with D or better
CSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**485**	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 and CSE 360 with C or better; may not enroll if received a C or better in CSE 423 or CSE 461
CSE	**486**	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 485 or currently enrolled.
CSE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Pre-Requisites: Must be an honors student.
CSE	**493**	Honors Thesis		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Pre-requisites: Must be an honor student.
CSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering or Computer Science - BS student and cumulative GPA must be greater than or equal to 2.50 OR Graduate Engineering students.
CSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	**507**	Virtual Reality Systems	Computer-generated 3-D environments, simulation of reality, spatial presence of virtual objects, technologies of immersion, tracking systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science PHD, Computer Science MCS, Comp Sci/Engr (Info Assurance) PHD or Comp Sci (Art/Media/Engr) PHD students AND C or better in CSE 408 or CSE 470 or CSE 508
CSE	**509**	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, MPEG 1, 2, 4, and 7 standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science Engineering graduate student
CSE	**510**	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**511**	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**512**	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**515**	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**520**	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**522**	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**530**	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**531**	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**532**	Advanced Operating System Internals	Memory, processor, process and communication management, and concurrency control in the Windows NT multiprocessor and distributed operating system kernels and servers. Ability to understand advanced concepts in operating systems is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**534**	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**535**	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**536**	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**539**	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**543**	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**545**	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**548**	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**550**	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**552**	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In may applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Admission to any SCI graduate program
CSE	**555**	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**561**	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**563**	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**564**	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**565**	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**566**	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**570**	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**571**	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**573**	Advanced Computer Graphics II	Modeling of natural phenomena: terrain, clouds, fire, water, and trees. Particle systems, deformation of solids, antialiasing, and volume visualization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**574**	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**576**	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**577**	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**578**	Advanced Geometric Modeling II	Advanced concepts of geometric modeling: Bezier curves, B-spline curves, blossoming, polygons, geometric algorithms, shape analysis. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**579**	NURBS: Nonuniform Rational B-Splines	Projective geometry, NURBS-based modeling, basic theory of conics and rational Bezier curves, rational B-splines, surfaces, rational surfaces, stereographic maps, quadrics, IGES data specification.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student or a Mathematics PHD student
CSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisites: Must be a Computer Science or Computer Science Engineering graduate student
CSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		

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CSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	CS	
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CSS	**432**	Issues in Chicana and Chicano Gender	Analyzes social construction of gender identities; emphasis on impact of American and Mexican cultural values on normative gender relations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
CSS	**490**	Field Studies in the Chicana and Chicano Community	Introduces principles and methods of qualitative research applied to the Chicana and Chicano community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
CST	**100**	Object-Oriented Software Development I	Basic concepts of object-oriented analysis, design, and programming using Java. Basic Java variables, expressions, arrays, statements, methods, and classes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**150**	Digital Systems	Number systems and arithmetic, Boolean algebra, combinational logic, K-maps, ROMs, PLAs, flip-flops, synchronous sequential circuits, introduction to HDL.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites:CST 100, or be co-enrolled in CST 100; MAT 117 or higher
CST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-3		
CST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**200**	Object-Oriented Software Development II	Object-oriented programming and design; information hiding; inheritance and run-time binding; polymorphism; recursion; GUI programming. Introduces software engineering concepts, including software development life cycles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 100 with a D or better
CST	**201**	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre/Co-requisite: CST 200
CST	**220**	Programming Languages for Technology with C/C++ and Scripting	Programming language design and implementation concepts through programming C/C++ and scripting; language paradigms, compilation and interpretation, types, run-time management, data control, pointers, inheritance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 150, and CST 200 with a D grade or better
CST	**230**	Applied Data Structures	Applications of data structures: strings, stacks, queues, trees, hash tables. Time/space complexity, recursion, searching, and sorting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 200 and MAT 243 with D or better
CST	**250**	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Must have taken CST 100, & 150 with a D or better. Must be co-enrolled in CST 251
CST	**251**	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**256**	C Programming for Engineering Technology	Applied and practical problem solving using the C programming language.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**298**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**315**	Software Enterprise I: Tools and Process	Introduces tools and techniques used in software enterprise/development, including coding, design, testing, configuration management, and personal process management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Completed CST 200 and CST 230 with a D or better
CST	**316**	Software Enterprise II: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**335**	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 230; MAT 243

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CST	**350**	Digital Systems Design with Verilog	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET150 or CST150 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**359**	Internet Networking Protocol	Computer networking for application, transmission control and network layers using the Internet protocols as a model; reliability and security.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**364**	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must have earned D or greater in CET 200 or CST 200 or be currently enrolled AND earned D or greater in CET 354 or CST 354 or be currently enrolled OR must be Technology Science BAS, MS, MSTECH, or Master Computing Studies student
CST	**383**	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Must be Technology Science non-degree or BS student AND earned C or greater in CET 100, CET256, CST100, or CST256 or currently enrolled OR must be Technology Science BAS, MS, MSTECH, Master Computing Studies, or Engineering PHD student
CST	**386**	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Tech Science or Eng BS/BSE/BAS/NonDegree AND C or greater in CST100 or CST256 AND C or greater in CST 250/251 OR Tech Sci BAS/MS/MSTECH, Master Comp Studies or Eng PHD student
CST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**415**	Software Enterprise III: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	L	
CST	**416**	Software Enterprise IV: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 415; ENG 102, 105, 108 or 112
CST	**420**	Foundations of Distributed Web-Based Applications in Java	Principles underlying design and implementation of distributed software components; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be Technology Science BAS/BS/MS/MSTECH student AND earned a C or greater in CET 230 or CST 230 or be currently enrolled AND earned a D or greater in CET 386 OR CST 386 or be currently enrolled
CST	**425**	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**427**	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**428**	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**433**	Database Technology	Introduces database technologies and DBMS, data models, and languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 230 and MAT 243 completed with a C or better or currently enrolled
CST	**441**	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**452**	Advanced Digital Systems Design with VHDL	Uses VHDL to design components of computers and digital systems. Design examples include RISC processor and ALU, memory controller, I/O controller. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**456**	Microcomputer Systems Interfacing	Programming using BIOS and DOS routines. Disk operations, TSR routines, and device drivers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 354 or CST 354 with C or better or enrolled; CET 420 or CST 420 with D or better or enrolled OR Techn and Innovation or Fulton Engr graduate student
CST	**457**	Advanced Assembly Language Applications	Applies 32-bit assembly language programming using advanced assembler techniques and interfacing to high-level languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CST 354 with D or better; CET 354 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**458**	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**473**	Digital/Data Communications	Signals, distortion, noise, and error detection/correction. Transmission and systems design. Interface techniques and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		
CST	**481**	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**482**	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		

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CST	**483**	Cyber Security Capstone Project	Applies security techniques to a real-world situation. Development of security policy, risk solutions, and incident response facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	2.		
CST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**486**	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET383 or CST 383 with C or better; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering Graduate student
CST	**488**	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be either Technology Science or Engineering BS/BSE/BAS/Graduate NonDegree/ MS/MSTECH AND earned C or greater in CET383 or CST383 AND CET386 or CST386 or be currently enrolled OR must be Tech Sci MS/ MSTECH or Eng PHD student
CST	**489**	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Technology and Innovation BS/BAS student or BSE student; CET 383 or CST 383; CST 359 (or CST 459 or CET 459) or Graduate Non-degree or MSTECH
CST	**490**	Reading and Conference		N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
CST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
CST	**496**	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-7		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering Graduate student
CST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-3		
CST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**520**	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequistes: CET364 or CST364 OR Graduate, Non-Degree, or Post Bacc student AND College of Engineering & Applied Sciences or School of Technology
CST	**533**	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
CST	**540**	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420
CST	**552**	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
CST	**554**	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**556**	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 420
CST	**557**	Embedded Applications Development	Current trends in embedded system development using C, assembly, and special purpose hardware. Development versus target environment issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**566**	Principles and Practices of Operating Systems	Principles and practices of operating systems: virtual memory systems, I/O devices and systems, file systems and organization, and other topics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**576**	Embedded Real-Time Programming	Topics in real-time embedded operating systems such as synchronization, communications, file systems, and memory sharing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0

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CST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**586**	Digital Modeling Techniques	Digital system modeling and simulation using hardware description languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering	1-12		
CST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		

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CST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-15		
CST	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		
CST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		
CST	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
DAH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**301**	Philosophy and Criticism of Dance	Philosophical issues in dance and dance criticism, with emphasis on written analysis and interpretation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
DAH	**492**	Honors Directed Study	Consult with an honors advisor before enrolling. May be repeated for credit.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DAH	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DAH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**495**	Theory and Methods of Dance Research	Examines modes of inquiry, data gathering techniques, data analysis and representation, prospectus design, and presentation style for dance research studies. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**502**	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DAH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DAH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		

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DAH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		
DAH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DAN	**122**	Rythmic Theory for Dance II		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**130**	Dance	Introduces styles and forms of dance; ballet, modern, jazz, tap, ballroom, ethnic. Fee.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**321**	Music Literature for Dance	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN222 and MUS340 with a grade of C or greater or be currently enrolled
DAN	**330**	Dance	Advanced levels. Continuation of DAN 230. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**351**	Methods of Teaching Ballet	Analysis and acquisition of teaching techniques and materials for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**352**	Dance Education Theory	Motivation; learning; assessment; historical, cultural, and social constructs; outreach; service; advocacy; curriculum development in dance education. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance major
DAN	**354**	Integrated Approaches to Dance Education	New methods of dance education pedagogy. Essential skills to employ and integrate instructional technology within dance curricula. Activities promote experiential and layered instruction in integrated approaches to multicultural pedagogy that include interdisciplinary, integrated, and immersion strategies of education. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**364**	Choreography and Accompaniment	Experience in the use of traditional and nontraditional musical structures as a basis for choreographic projects.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-Requisites: Must have completed DAN265 with a grade of C or greater or be currently enrolled
DAN	**365**	Advanced Choreography	Investigation and practice of contemporary styles of choreography.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN364 with a C or greater; must have completed DAN265 with a C or greater or be currently enrolled
DAN	**380**	Performance Studies Practicum	Focus on developing rehearsal skills and achieving performance excellence through the preparation of three completed works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**435**	Technique and Theory of Ballet	Study of professional advanced ballet technique with emphasis on preparation for performance. 4 hours weekly. May be repeated for credit.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DAN	**445**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement investigation, observation, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DAN	**471**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. May be repeated for credit. fee	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**472**	Concert Dance	Extensive preparation of repertory or new works created by experienced choreographers. Simulates dance company experience, culminating in performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**496**	Senior Dance Education Capstone	Original research that integrates dance and education. Includes production of written document and public presentation. Fall semester must be completed before spring registration. Must be repeated for a total of 4 semester hours.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DAN 350 with C or better; DAN 352 with C or better; DAN 354 with C or better; DAN 356 with C or better
DAN	**510**	Dance Production	Theory of costuming, lighting, makeup, scenery, and sound as related to dance performance. May be repeated once for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAN	**522**	Sound Design for Dance	Focus on digital recording/editing of audio compositions for choreographic and video projects. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1-2		Pre-requisite: Must have completed DAN 521 or be co-enrolled in DAN 521
DAN	**545**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement integration, observation, critical research, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**551**	Graduate Dance Pedagogy: Ballet	Advanced analysis of teaching techniques for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**671**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3-4		Pre-requisites:Must be a Graduate Student
DCE	**100**	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	

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DCE	**110**	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**111**	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**112**	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**113**	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**114**	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**116**	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**117**	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**118**	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**120**	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**121**	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**122**	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**123**	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**124**	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**125**	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**126**	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**130**	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major
DCE	**131**	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance student; DCE 130 with C or better
DCE	**134**	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**135**	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**160**	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**161**	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	**170**	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance major

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DCE	**171**	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance majors
DCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**201**	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**210**	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	**211**	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	**216**	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	**220**	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	**221**	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**222**	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	**223**	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	**224**	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	**225**	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	**230**	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	**234**	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**235**	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**260**	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major; DCE 161 with C or better
DCE	**262**	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**263**	Rhythmic Theory for Dance II	Continuation of DAN 221 with an emphasis on small group/movement projects in relation to musical time and structure. CD-ROM work included. Students with rhythmic theory transfer credit may meet the enrollment requirements by passing a proficiency exam. Please contact the instructor of the course for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**270**	Second-Year Seminar I	Theory and practice of lighting, scenery, sound, and stage management for dance production. Labs cover all areas of production.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites: Dance Majors only; DCE 171, First-Year Seminar or DCE 194: First-Year Seminar
DCE	**271**	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisites: Dance Majors Only
DCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**302**	Cross-Cultural Dance Studies	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	(L or HU) & G	Pre-reqs: DAH 201 or DCE 201 with C or better; ENG 101 and ENG 102 OR ENG 105 with C or better

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DCE	**324**	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)
DCE	**325**	Latin/Salsa III	Refines dances learned in the intermediate level of major Latin dances, including salsa, cha cha, rumba, meringue, bachata, and samba. Prepares students to have a more advanced command of the complex rhythms and figures used in the major Latin dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 225 or DAN 294 (Latin/Salsa II)
DCE	**334**	Technique and Theory of Modern Dance	Advanced concepts of modern dance technique. Development of movement quality and performance skills. 6 hours weekly. Placement audition required.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**335**	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**340**	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	CS	Pre-requisite: ART 112 or Dance BFA, Dance Minor or BIS: Dance concentration student
DCE	**350**	Dance for the Classroom Teacher	Develops teaching methodology for implementation of dance curriculum in K-12 classrooms.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DCE	**354**	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**356**	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major
DCE	**370**	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 271 with a Y
DCE	**371**	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**401**	Dance History	History of dance with a focus on Western forms from the Renaissance to contemporary times. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU	
DCE	**434**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance technique. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**437**	Dance Kinesiology	Principles of kinesiology applied to dance movement, including identification of muscular imbalances, inherited anatomical differences, and pathomechanics in dance technique.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance BFA student; BIO 201 with a D or better
DCE	**438**	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	**460**	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**461**	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance students; DCE 460 with C or better
DCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**492**	Honors Directed Study		N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DCE	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-7		

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DCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**501**	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**530**	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**534**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		Pre-requisite: Dance Graduate student
DCE	**535**	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**538**	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: MFA Dance student
DCE	**540**	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**543**	Sound Design for Dance	Audio mixing for analog/digital recording and editing. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors
DCE	**554**	Graduate Dance Pedagogy	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**560**	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**561**	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student; DCE 560
DCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		

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DCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DCE	**634**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student
DCE	**660**	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites:Must be a Graduate Student
DCI	**510**	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**511**	Establishing Effective Teaching Practice	Helps beginning teachers establish and strengthen best practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**512**	Developing Strategies for Teaching Practice	Helps beginning teachers refine management strategies and instructional methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**520**	Teaching Standards Applied to Professional Practice	Develops teacher skills and self-reflective practices to assess instruction and document and achieve professional growth in teaching standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**521**	Reflective Practice in Teaching Standards	Teachers apply reflective practices to develop professional presentation portfolios.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
DCI	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**530**	Establish a Mentoring Partnership	Prepares veteran educators for mentoring. Mentors collaborate, reflect on their practice, and become teacher leaders through professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**531**	Analyzing and Planning for Professional Growth through Mentoring	Refines strategies for assessing instruction and provides collegial feedback.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
DCI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: COE 501or DCI 510 with B or better
DCI	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**701**	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**702**	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**703**	Research in Teacher Development and Leadership	Examines research in teacher education and development from preservice through in-service. Students participate in the review of research related to broad themes within the recent literature. Strands/themes of investigation include a brief review of the history of teacher education, teacher development, professional development and teacher leadership, teacher evaluation, qualitative and quantitative research in teacher education, reform in teacher education, including recent policies and politics and other issues.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**704**	Adult Learning Theory and Practice	Explores the multiple dimensions of learning in adulthood, including the social contexts of learning, and cognitive and developmental aspects of learning. Focuses on the experience and practice of adult learning, and examines the various theories attempting to explain how adults learn.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
DCI	**705**	Teacher Leadership Theory and Professional Practice	Teacher leaders analyze leadership skills as they reflect on their own practice and professional development experience. They process knowledge of how to effectively promote positive practices among teachers at varied stages in their careers. Teacher leaders are involved in scholarly inquiry and discourse by means of leadership institutes, peer collaboration, reflective questioning and individual research. Teacher leaders also develop the perspective of the teacher as researcher as they read and critically evaluate published research related to teacher leadership in professional and academic literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
DCI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
DCI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**451**	Design Research and Educational Gaming Practicum	Principles of design research as applied to educational games. Includes implementation of a design research project.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: RDG 440 with C or better; EDT 329 with C or better
DCI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
DCI	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
DCI	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
DCI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
DNP	**600**	Research Methods	Course on research methods in a specific discipline.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**601**	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**602**	Principles of Research Methods and Evidence-based Practice	Examines processes of scientific inquiry and their application to generating knowledge for and refining nursing practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**603**	Evaluating and Applying Evidence in Healthcare Outcomes	Examines the role of inquiry and innovation in scientific, theoretical, and practical underpinnings of healthcare improvement.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisite: Graduate Nursing Program student
DNP	**604**	Advanced Human Pathophysiology Core	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**605**	Advanced Health Assessment Core	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
DNP	**607**	Advanced Human Pathophysiology Women's Health	Didactic course for women's health nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**608**	Advanced Pharmacotherapeutics Core	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate Nursing Program, Doctor of Advanced Nursing Practice. Co-enrolled in either: DNP 612, 622, 632, 642, or DNP 672
DNP	**609**	Advanced Practice Nursing Role I	First of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: Nursing Graduate Program
DNP	**610**	Advanced Practice Nursing Role II	Second of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP 609 with B or better
DNP	**611**	Advanced Health Assessment of Women Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of women across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 605

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DNP	**612**	Applied Pharmacotherapeutics for Women	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for women.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 608
DNP	**613**	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	**614**	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	**615**	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	**616**	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	**617**	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	**618**	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	**620**	Advanced Human Pathophysiology Adult	Didactic course for adult nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 604
DNP	**621**	Advanced Health Assessment of Adults Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of adults and adolescents.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 605
DNP	**622**	Applied Pharmacotherapeutics for Adults/Geriatrics	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for adults and geriatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 608
DNP	**623**	Adult Health Promotion	Introduces adult health promotion and disease prevention, emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 624
DNP	**624**	Adult Health Practicum I	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 623
DNP	**625**	Management of Common Problems in Adults	Includes theory/research that guides the management/maintenance of adults with chronic health alterations. Emphasizes psychophysiological interrelationships of illnesses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 626
DNP	**626**	Adult Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 625
DNP	**627**	Management of Complex Health Problems in Adults	Didactic course designed to complement DNP 628. Focus on application of EBP in care of adults with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requiste: DNP 628
DNP	**628**	Adult Health Practicum III	Clinical practicum designed to complement DNP 627. Focuses on application of EBP in care of adults with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 627
DNP	**630**	Advanced Human Pathophysiology Family	Didactic course for family nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 604
DNP	**631**	Advanced Health Assessment for Family Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 605
DNP	**632**	Applied Pharmacotherapeutics for the Family	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 608
DNP	**633**	Family Health Promotion in Primary Care I	First didactic role specialty course. Focuses on concepts and strategies to promote, manage, and maintain health of child, adult, and family.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	**634**	Family Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	**635**	Management of Common Family Problems in Primary Care II	Second didactic role specialty course utilizing knowledge from previous courses to formulate therapeutic promotion, management, and maintenance for individuals across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	**636**	Family Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	**637**	Management of Complex and Chronic Family Problems in Primary Care III	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan for the Family Nurse Practitioner role specialty.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638

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DNP	**638**	Family Health Practicum III	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	**640**	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 604
DNP	**641**	Advanced Health Assessment for Children Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of children from birth to age 21 years.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 605
DNP	**642**	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 608
DNP	**643**	Developmentally Based Care of the Well Child	Focuses on current practices, research, and issues related to health promotion and disease prevention for children and adolescents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	**644**	Well Child Advanced Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	**645**	Management of Common Problems in Pediatric Primary Care	Focuses on concepts, theories, and research as a basis for strategies related to management of illness and health maintenance for children.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	**646**	Advanced Practicum II in Pediatric Primary Care	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645
DNP	**647**	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on strategies for health maintenance and management of childhood acute illnesses, complex and chronic illnesses, and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	**648**	Management of Complex and Chronic Problems in Pediatric Primary Care-Practicum III	Clinical course assists students in developing advanced clinical skills in pediatric health promotion and advanced-practice clinical decision making; includes the diagnosis and treatment of complex and chronic problems in pediatric primary care.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647
DNP	**650**	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 604
DNP	**651**	Advanced Health Assessment of Neonates Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 605
DNP	**652**	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**653**	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	**654**	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	**655**	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	**656**	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	**657**	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**658**	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	**659**	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	**660**	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiolgy and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**662**	Advanced Mental Health Assessment Across the Lifespan Lab/Practicum	Focuses on integration of knowledge and development of skills in assessment of psychiatric disorders occurring in children, adolescents, and adults.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		

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DNP	**663**	Mental Health Promotion in Adults	Analyzes issues, theories, and research in restoration and promotion of mental health. Emphasizes developing conceptual framework for psychiatric nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 664
DNP	**664**	Adult Psychiatric Mental Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 663
DNP	**665**	Management of Common Mental Health Problems in Adults	Focuses on development of theoretical basis for intervention and a knowledge base for collaboration and consultation in the mental health area.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Corequisite: DNP 666
DNP	**666**	Adult Psychiatric Mental Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 665
DNP	**667**	Management of Complex and Chronic Mental Health Problems in Adults	Focuses on modalities of evidence-based treatment with adolescents and adults with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 668
DNP	**668**	Psychiatric Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic adolescent and adult mental health disorders.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 667
DNP	**671**	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**672**	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications as a treatment for children and adolescents with mental health disorders.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**673**	Mental Health Promotion in Children, Adolescents, Adults, and Families Across the Lifespan	Focuses on evidence-based interventions to promote the mental health of children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Child and Family Psychology Nurse Practioner), (Child & Adolescent Mental Health) or Child and Family Mental Heath Nurse Practioner; DNP 671; DNP 672; Co-requisite: DNP 674
DNP	**674**	Child and Family Mental Health Practicum II	Clinical experiences to become skilled in assessment and evidence-based individual psychotherapy of common mental health disorders in children, adolescents, adults and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 671; DNP 672; Co-requisite: DNP 673
DNP	**675**	Management of Common Mental Health Problems in Children, Adolescents, and Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with common psychopathology.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Prerequisite: Graduate Nursing student; DNP 673; Co-requisite: DNP 676
DNP	**676**	Child and Family Mental Health Practicum I	Clinical experiences to become skilled in assessment and evidence-based management of common mental health disorders in children, adolescents, and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Prerequisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; Co requisite: DNP 675
DNP	**677**	Management of Complex/Chronic Mntl Hlth Problems in Children, Adolescents&Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate Nursing student; DNP 673; DNP 675; Co-requisite: DNP 678
DNP	**678**	Child and Family Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 674; DNP 676;Co-requisite: DNP 677
DNP	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
DNP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
DNP	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**685**	Geriatric Health Promotion Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
DNP	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Nursing and Healthcare Innovation PhD or DNP student. Pre/Co-requisite: DNP 682 or NUR 682. credit is allowed for only DNP or NUR 686

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DNP	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
DNP	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
DNP	**689**	Geriatric Chronic Disease and Syndrome Management Practicum III	Diagnosis, management and application of advanced knowledge and skills for comprehensive primary care and care of older adults with geriatric chronic diseases and syndromes.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
DNP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
DNP	**696**	Advanced Human Pathophysiology Older Adults	Didactic course for gerontological/geriatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
DNP	**704**	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student
DNP	**705**	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	**708**	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**709**	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**710**	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:One of the following DNP concentrations:Adv Nurs Pract(AduNurPractnr); Adv Nur Prc (Child/Fam Psy NP); Adv Nursing Practice;Adv Nur Prac (Family NP);Adv Nur Prac (Neonatal NP); Adv Nur Prac (PediatricNP); AdvNurPracAdl
DNP	**711**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**712**	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DSC	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
DSC	**101**	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
DSC	**180**	Athena Design Success	Facilitates academic success for first-year College of Design students in the Athena program through developmental, educational, and professional experiences.	N	DIS	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
DSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**236**	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

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DSC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
DSC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
DSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
DSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	**501**	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**520**	Contemporary Design Issues	Projected applications in design production, planning, and decision-making processes.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**525**	Design Methodologies	Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Fee.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
DSC	**558**	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design student
DSC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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DSC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
EA	**555**	Sch-Plant-Plan-Main		Y	LEC	Y	CNV	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
EAC	**426**	Professional Knowledge in Early Childhood Education	Explores issues related to professional knowledge, including disciplinary instruction and the impact of the community on students¿ learning.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
EAC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
ECD	**501**	Interprofessional and Family Collaboration	Explores trends and practices, educationally appropriate instruction and resource materials, methods and strategies in early childhood education. Discusses history of the field, theory, contemporary issues and controversies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**505**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**520**	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**522**	Developmental Social Experiences in Early Childhood Education	Materials, techniques, aesthetic expression, creative activities, and values in the integrated curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**527**	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**544**	Play-Based Education in Inclusive Settings	Theories of play and the educational implications of each in an early childhood/elementary inclusive curriculum for best teaching practices. Practical applications for the primary grades of the elementary and preschool setting in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**548**	Childhood Studies and Social and Political Environments	Examines the emergence of interdisciplinary/transdisciplinary childhood studies from historical, social, and political contexts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only

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ECD	**549**	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**555**	Contemporary Practices in Early Childhood	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**565**	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**571**	Pre-K Student Teaching	Supervised field experience consisting of 160 total hours of work with children between the ages of birth to age 4.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	4.		Pre-requisite: Graduate students only
ECD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**601**	Theories and Issues in Early Childhood Education	Current theories and issues in early childhood education. Presents issues of early childhood best practices, policy, theory, research, and evaluation that are of significance to the early childhood professional. Highlights building on the child development conceptual framework as related to theory and practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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ECD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
ECD	**733**	Social and Emotional Development	Inquiry into the social and emotional development dynamics in children, such as peer relationships, self-concept, and parenting processes, with implications for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**503**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**541**	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth throught eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children's diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECD	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**555-W**	Modern Practices in Early Childhood Education	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**570**	Pre-K Internship	Field experience consisting of 30 total hours of work with children between the ages of birth-age 4. Required for Arizona Dept. of Education Early Childhood Endorsement.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**578**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECD	**211**	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork. May be repeated once for credit.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
ECD	**220**	Nutrition, Health, and Safety for Young Children	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Students are required to have first aid and CPR certification, which may require a fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
ECD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**301**	Technology, Media, and Community-Based Education for Young Children	Examines technology, media, toys, and community-based educational opportunities to support the education of three- to eight-year-old children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**302**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**312**	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**313**	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**315**	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**316**	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**321**	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**323**	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**324**	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**341**	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**355**	Accommodating Instruction in Early Childhood Education	Identifying and accommodating learners with special needs, including classroom adaptations in instruction and assessment, for pre-K-3 classroom environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

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ECD	**396**	Field Experience: Community-Based Early Childhood Education Setting	Observation in classrooms and individual and small group instruction. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**397**	Field Experience II	Instruction, observation, and management of small groups and the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**402**	Integrated Curriculum and Assessment: Math and Science	Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade, within an integrated curriculum approach.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**403**	Educational Environments: Preschool/Kindergarten/Primary Grades	Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**405**	Practicum in Teaching Reading and Language Arts in Early Childhood	Supervised experience teaching reading and language arts at the preschool, kindergarten, and primary-grade (1-3) levels. Developmentally appropriate strategies to promote young children's speaking, listening, reading, and writing abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**406**	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**410**	Science Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood science; age-appropriate standards; active investigation of science concepts; inquiry and collaborative learning; connections between science and other subject areas. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**412**	Mathematics Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood mathematics; age-appropriate standards; active investigation of mathematics concepts and ideas; connections between mathematics and other subject areas.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**413**	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**414**	Interprofessional Practicum	Investigates services and agencies available in the local community to parents of children with special needs. Practical experiences with an intermittent seminar format. Dispositions, knowledge, experiences, and skills necessary for interprofessional collaboration across multiple agencies and programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**415**	Practicum - Literacy Curriculum, Instruction, and Assessment, K-3	Supervised experience teaching reading and language arts in the primary grades.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**416**	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**470**	Early Childhood Education Student Teaching Seminar	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**476**	Integrated Curriculum: Birth-Pre K	Introduction to teaching children birth through pre-K, including classroom organization, curriculum, and professional relationships.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**477**	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	4-6		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**478**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	5-8		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**479**	Capstone Seminar in Early Childhood Education	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**481**	Issues and Practices in Early Childhood Education	Stakeholder analysis of teacher education experiences applicable to preparation that leads to increased educational opportunity and success for diverse children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**493**	Honors Thesis	Honors Thesis	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
ECD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

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ECD	**496**	Field Experience III	Instruction and management of small groups and substantial work with the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
ECD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECE	**330**	electrical Networks		N	LEC	N	CNV	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	4.		
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
ECN	**201**	Economic Issues and Analysis	Introduces tools used in basic economic analyses, emphasizing application to contemporary national and international issues. Not open to students with credit in ECN 211 or 212	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisite: Not open to students with credit in ECN 211, ECN 212, 213, or ECN 214
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**213**	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 210, MAT 211, MAT 270 or MAT 271.
ECN	**214**	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 211 or MAT 271.
ECN	**221**	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: MAT 211 or MAT 271 with a C or better or currently enrolled
ECN	**231**	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must be an Honors student; Must have completed MAT 211 or MAT 271 with a grade of C or greater or be currently enrolled.
ECN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be an Honors Student; Must have completed one of the following courses with a grade of C or greater or co-enrolling: MAT 210, MAT 211, MAT 270, MAT 271 or MAT 272
ECN	**303**	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	**306**	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled. May not enroll if completed IBS 306 with a D or greater
ECN	**312**	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**313**	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	**315**	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**331**	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**335**	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre- or corequisites with grade of "C" or better: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271.
ECN	**345**	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with grade of C or better.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	**360**	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**365**	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**382**	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	**384**	Economics of Social Behavior	Applies economic analysis to contemporary behavior; discrimination, work versus leisure, crime, medical care, macroeconomic policies. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must have minimum cumulative GPA of 2.00; Must have minimum of 56 total earned hours or be a non-degree seeking student OR any Graduate degree seeking student
ECN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**404**	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**410**	Applied Business Forecasting	Applies forecasting techniques in business and institutional environments. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 221 or STP 226, AND ECN 214 or ECN 312/314 with a grade of C or greater.
ECN	**413**	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**414**	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**416**	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**421**	Earnings and Employment	Origins of labor movement, analysis of labor unions, labor markets, collective bargaining, and current policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Prerequisites: With a grade of "C" or better: ECN 214 (or 312). Pre- or corequisite: ECN 213 (or 313).
ECN	**425**	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314, AND ECN 221, ECN 231 or STP 226 with a grade of C or greater
ECN	**436**	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**438**	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 213 or ECN 313 with a grade of C or greater or be currently enrolled
ECN	**441**	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**445**	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 213 or 313; ECN 214 or 312 or 314; MAT 211 or 271 with grade of C or better.
ECN	**450**	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**453**	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**470**	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**475**	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	L	Pre-reqs: ECN 213 or 313 AND ECN 214 or ECN 312/314 with C or greater; senior standing.
ECN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Min 3.0 ASU cum GPA; ECN 213 or 313, and ECN 214 or 312/314 with a grade of C or greater.
ECN	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: Must have completed ECN 313and ECN 314 with a grade of C or greater or be currently enrolled

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ECN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**501**	Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		
ECN	**502**	Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	**503**	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a MBA degree program student
ECN	**504**	History of Economic Thought	Historical development of economic theory. Emphasizes the development of economic analysis from preclassical economics through Keynes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**509**	Macroeconomic Theory and Applications	Theory of income, output, employment, and price level. Influence on business and economic environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**510**	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**525**	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:MAT 210 with a grade of D or better or currently enrolled
ECN	**527**	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**530**	Experimental Design	Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate Students only (degree and non-degree seeking)
ECN	**535**	Multivariate Methods	Advanced statistical methods used in business research. Multivariate analysis of association and interdependence.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**540**	Forecasting	Foundation of statistical forecasts and forecast intervals; applies classical and computer-assisted forecasting methods to business forecasting problems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites:QBA 502, MAT 210 completed with a D or better, or currently enrolled
ECN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 712 and ECN 714 with a grade greater than a C
ECN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		

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ECN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**711**	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**712**	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**713**	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**714**	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**715**	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 with a grade of C or greater; Must have completed ECN 713 with a grade greater than a C
ECN	**716**	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 714 with a grade of C or greater; Must have completed ECN 712 with a grade greater than a C
ECN	**717**	International Macroeconomics	Intertemproal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
ECN	**721**	Labor Economics	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**722**	The Aggregate Labor Market	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**725**	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**726**	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 725 with a grade better than a C
ECN	**727**	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater;
ECN	**736**	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**738**	International Finance	Foreign exchange market, balance of payments, and international financial institutions and arrangements; theory and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**741**	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: W.P. Carey Graduate degree-seeking students only; Must have completed ECN 712 with a grade of B or greater; Co-requisite: ECN 714
ECN	**753**	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**760**	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 and ECN 712 with a grade greater than a C; Co-requisites: ECN 713 and ECN 714
ECN	**770**	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics: nonlinear programming, the Kuhn-Tucker theorem, concave programming, optimization over time.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student

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ECN	**784**	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
ECN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
ECN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
ECN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
ECT	**479**	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	3.		
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**511**	School Law	Constitutional, statutory, and case law that relates to all school personnel, pupils, the school district, and other governmental units. Contracts, dismissals, tenure, retirement, pupil injuries, liability of personnel and district, school district boundary changes, and bonding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**515**	Administration and Technology in Learning	Provides students with hands-on exposure to technology that assists with school improvement initiatives.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**525**	Human Relations and Societal Factors in Education	Interrelations between problems of educational administration and interdisciplinary social sciences. Communications skills, morale, authority, and perception. Concepts from political science, economics, and social-psychology useful to the administrator.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**534**	Concepts of Learner-Centered Leadership	Principles, theories, attributes, and skills related to learner-centered leadership.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**548**	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**555**	Educational Facility Planning	School building needs, educational planning for facilities, responsibilities of architects, duties of contractors, and equipping and furnishing of school buildings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**571**	School Business Management	Purchasing, budgeting, accounting, payroll management, auditing, financial reporting, insurance, and administration of nonteaching personnel and services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**573**	Human Resources Administration	Organization for human resources services; development of policy to govern the human resources function and its related processes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**576**	The School Principalship	Problem and lab approaches used to provide application of administrative activities of elementary and secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**611**	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**624**	Organizational Development and Management of Schools	Current organizational patterns for public schools. Emphasizes the organizations, human, and social dimensions on organizations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**645**	Leadership Development for Education Leaders	Principles, theories, attributes, and skills related to individual leadership development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**675**	Politics of Education	Uses social science theory and research to consider the political context of educational policy making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**676**	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**679**	Administration of Special Programs in Education	For personnel administering special educational services; responsibilities of superintendents, principals, supervisors, and directors for special education, student personnel, audiovisual, library science, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**711**	Administrative Leadership	Emphasizes research in leadership; application of research findings to administrative and supervisory functions in educational endeavors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**722**	Administration of Instructional Improvement	Recent research relating to administrative and supervisory responsibilities for the improvement of the educational program. Effective processes by administrators, supervisors, consultants, and coordinators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**723**	Diversity in Education for School Leaders	Discusses current issues and leadership strategies for meeting the needs of diverse student populations combating inequity and inequality in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDA	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EDA	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		

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EDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-3		
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		
EDA	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**512**	Critical Issues in Educational Leadership	Legal and ethical concepts of educational practices in federal and state laws affecting charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**514**	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**521**	Evaluation of Teaching Performance	In-depth analysis of legal basis of teacher appraisal, teacher competency, measurement of teacher performance, and application of performance appraisal systems.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**524**	Theory and Application of Educational Administration	History and development of public school administration in the United States; current organizational patterns for public education at local, intermediate, state, and national levels; current theoretical positions in educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**547**	Marketing and Community Relations for Educational Entrepreneurs	Strategic marketing and community relations concepts and their application, formulation, and execution in charter and independent schools and related services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**556**	Management and Human Resources for Educational Entrepreneurs	Entrepreneurial leadership and organization theory applied to managing human resources in competitive educational organizations by increasing the effectiveness of decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**557**	Facilities Planning for Educational Entrepreneurs	Legal and practical implications involved in designing or refurbishing charter school facilities to maximize space to facilitate student development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**558**	Financial Planning and Reporting for Educational Entrepreneurs	Financial planning and reporting concepts, requirements, and procedures for charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**572**	School-Site Business and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**578**	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**634**	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EDA	**772**	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**773**	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDC	**425**	Integrated Learning Experience IV: Advanced Management and Professional Knowledge	Explores issues related to professional knowledge, including interdisciplinary instruction, management, and the impact of the community on students' learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Admission to Professional Teacher Preparation Program
EDC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	Institute & Grad Sch Education	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**302**	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDP	**303**	Human Development	Selected aspects of child and adolescent development. Emphasizes possibilities for influence by teachers and parents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
EDP	**310**	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	SB	
EDP	**313**	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
EDP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**454**	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
EDP	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
EDP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
EDP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDP	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**510**	Essentials of Classroom Learning	Theoretical and empirical foundations of learning in the classroom milieu. Critical exposure to research and method in instructional psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	**513**	Child Development	Examines problems and achievements experienced by children growing up in a technological society. Emphasizes discovering the child's perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**514**	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**530**	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**535**	Applied Behavior Analysis	Principles of conditioning as applied to behavior. Current research on the experimental analysis of behavior in educational psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**536**	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**540**	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**541**	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**542**	Research Methods in the Learning Sciences	Students read, design, and carry out original research in the learning sciences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be a Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student and completion of EDP 540 with a grade of C or better
EDP	**544**	Psychology of Reading	Alternate analyses of the reading process; designs and procedures for investigating instructional and noninstructional variables related to reading achievement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**545**	Higher-Order Processes in the Learning Sciences	Examines original research on induction, deduction, analogy and transfer, knowledge representation, and other issues in learning.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**550**	Introduction to Measurement in Education	Nature and types of educational measures. Critiquing and selecting appropriate measuring devices. Constructing measuring devices. Social controversies about tests.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**552**	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**554**	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**560**	Individual Intellectual Assessment	Issues in administration and interpretation of individual intelligence tests. Theoretical basis, ethical considerations, and diagnostic use of test results. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: School Psychology Ph.D or Counseling Psychology Ph.D
EDP	**561**	Lab in Psychological Assessment	Lab experience in administration, scoring, and interpretation of individual intelligence tests.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Co-enrolled in EDP 560
EDP	**562**	School Psychology: Ethics, Theory, and Practice	Provides information regarding the ethics, history, and theory of current school psychology practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**563**	Interventions in School Psychology	Examines case-based consultation and consultation research relevant to school psychology practice.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**564**	Academic Interventions	Skills-building course emphasizing academic interventions and outcome-based educational decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**566**	Diagnosis of Learning Difficulties	Clinical diagnosis of learning difficulties, emphasizing specific academic problems. Use and interpretation of diagnostic instruments in practical school situations. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDP 560 and 562 with a grade of B or better
EDP	**567**	School Psychological Services to Minority Students	Historical perspectives and major issues in psychological and academic assessment and interventions with minority school children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**568**	Diagnosis and Interventions for Children and Adolescents with Emotional Handicaps	Clinical diagnosis of emotional handicaps in children and adolescents with emphasis on interpretation of diagnostic instruments and designing appropriate interventions in school settings. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**651**	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of COE 503 with a grade of C or better
EDP	**652**	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**654**	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**311**	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
EDP	**323**	Professional Development, Learning, and Motivation	Applies educational psychology principles in classrooms; strategies for building classroom community; learner-centered and intentional teaching; and proactive professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
EDT	**321**	Computer Literacy	Surveys the role of computers in business, industry, education, and personal life. Lab experience with word processing, spreadsheet, and presentation software as well as Internet research and the creation of a personal Web site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDT	**323**	Computer Applications	Introduces database design principles using Microsoft Access and general programming concepts using the Visual Basic.Net programming language.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	Pre-requisites: EDT 321 or CSE 180 or any ACO, CIS, CSE, or CST course with a D or better or currently enrolled
EDT	**329**	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**405**	Presentation Technology for Multimedia	Explores multimedia hardware and software used in creating presentations for educational, corporate, and commercial applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**406**	Computer Graphics and Animation	Study and application of design and animation techniques for use in video or computer-based presentations.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**455**	Authoring Tools	Use of current authoring tools to design and deliver computer-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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EDT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDT	**501**	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**502**	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**503**	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**504**	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**505**	Multimedia Presentation Techs	Explores the design of multimedia presentations and the utilization of tools and resources to effectively deliver those presentations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**506**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**507**	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: EDT 501 with B or better
EDT	**511**	Technology Applications in Education	Integrates and evaluates emerging technologies into K-12 and adult teaching and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**520**	Educational Technology and Training	Applies educational technology to training and human performance systems in business, industry, and government; emphasizes trends and project management.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 with a grade of C or better
EDT	**523**	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**525**	Web Resources for Educators	Explores Web-based and distance learning applications for educators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**527**	Instructional Video Production	Design and production of instructional video.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 503 with a grade of C or better
EDT	**528**	Development of Web-Based Instruction	Design and development of online instruction using advanced technologies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**530**	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**531**	Hypermedia	Design, development, and evaluation of open-ended, nonlinear computer-based tools and applications.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 455 with a grade of C or better
EDT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, 502, and EDT 503 with a grade of C or better
EDT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, EDT 502, and EDT 503 with a grade of C or better
EDT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Students who have credit for RDG 634, may not enroll in EDT 634
EDT	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDT	**701**	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 and 502 with a grade of C or better
EDT	**702**	Research in Technology-Based Education	Critical exposure to theories, research, and methods in technology-based education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**703**	Research in Distance Education	Seminar with emphasis on research in telecommunications and distance education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: EDT 523 with a grade of C or better
EDT	**704**	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
EDT	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completed EDT 501, EDT 502, and EDT 503 with a C or better
EDT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Completion of EDT 701 with a grade of C or better
EDT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**524**	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisite: Practicing or licensed K-12 teacher

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EDT	**545**	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**546**	Using Technologies for Presentations	Students create presentations appropriate for educational settings and electronic portfolios on CD-ROMs using scanners, digital/video cameras, and multimedia software. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**547**	Technology in Language Arts and Social Studies Education	Examines numerous ways technology is used to enhance teaching and learning in language arts and social studies classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**548**	Technology in Mathematics and Science Education	Examines numerous ways technology is used to enhance teaching and learning in mathematics and science classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**549**	Using the Internet and Case Studies to Solve Educational Problems	Provides a model of the use of distance education technologies.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**555**	Advanced Web Site Design and Development	Prepares technology leaders to design and create interactive school and district Web sites.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**556**	Managing School Information Systems	Applied course based on constructivist theory that examines the techniques and strategies of networking information systems within educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**575**	Critical Issues in Technology	Exploration and critical analysis of theoretical issues related to using technology in education. Students do literature reviews for EDT 593.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
EDT	**180**	Computer Literacy	Introduces personal computer operations and their place in society. Problem-solving approaches using databases, spreadsheets, and word processing. Credit is allowed for only EDT 180 or 321.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	CS	Students may not sign up for EDT 180 who have received a C or better in EDT 321.
EED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**511**	Principles of Curriculum Development	Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of conceiving and effecting change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**526**	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**529**	Science in the Elementary School	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**530**	Outdoor/Environmental Education	Use of various outdoor settings as laboratories for classroom-related experience, study, observation, inquiry, research, and recreation. Includes strategies and materials for developing environmental literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
EED	**537**	Mathematics in the Elementary School	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**538**	Teaching Social Studies with Literature	Develops the rationale, resources, and strategies for adopting a literature-based approach to social studies teaching in grades K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**581**	Diagnostic Practices in Mathematics	Specific skills in diagnosing and treating children's learning difficulties in mathematics. Includes practicum experiences, both on and off campus, in identifying strengths and weaknesses and initial remediation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EED	**720**	Language in Education	Sociolinguistic seminar on language issues in education, including language acquisition, classroom interaction, language attitudes, relation language, and class-gender ethnicity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**730**	Discourse Analysis in Education	Surveys issues in and approaches to discourse analysis in educational research, with focus on students' projects using discourse analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**521**	Instructional Planning and Management in the Inclusive Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**531**	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**576**	Field Experience	Applies course content in elementary classrooms: observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**578**	Student Teaching in the Elementary School	Student teaching in elementary education setting for students in the MEd with Concentration in Teacher Certification.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**579**	Apprentice Teaching in Elementary Education	Apprentice teaching in elementary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
EED	**324**	Social Studies in Elementary Schools	Social studies education standards, curriculum, and instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**397**	Field Experience II	Observation, instruction, and management of small groups and the whole class. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**411**	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**412**	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**414**	Elementary School Curriculum and Organization	Rationales for instructional curricula; alternative curriculum designs and broad-based content; selected topics in school governance, finance, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Co-requisites: Elem Ed student, EED 411, EED 412, RDG 413 and EED 496 OR PDS (Professional Development School) student
EED	**433**	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management, and assessment practices. Lecture, discussion, lab.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program

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EED	**464**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**478**	Student Teaching in the Elementary School	Student teaching in elementary school classrooms, Synthesized experience in curriculum, instruction, and classroom management	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**479**	Capstone Seminar in Elementary Education	Reflective, experienced-based integration of theory and practice; professional development for K-8 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**492**	Honors Directed Study	Honors Directed Study	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Must be an Honors student
EED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisite: Must be an Honors student
EED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**496**	Field Experience III	Applies course content in a K?8 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7	L	Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EEE	**101**	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	2.		
EEE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		
EEE	**202**	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: EE student with Intro to ES; Pre/Co-requisite: PHY 131 and MAT 274 or 275 (with C or better if completed) OR Non-EE student with any Intro to Engr, Pre/Co-requisite: PHY 131 and MAT 274 or 275
EEE	**203**	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in EEE 202 (or currently enrolled) or EEE 302 AND a grade of C or better in MAT 242, 342 or 343 or be co-enrolled in MAT 242, 342 or 343.
EEE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in CSE 100 or CSE 110 or CSE 200 AND a grade of D or better in CSE 120 or EEE 120.
EEE	**241**	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: MAT 362 and PHY 131 with C or better or currently enrolled; ECE 201 with D or better OR MAT 267 or 272 and MAT 274 or 275 and PHY 131 with C or better or currently enrolled; EEE 202 with D or better or currently enrolled
EEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**304**	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a grade of D or better or be currently enrolled in EEE 203
EEE	**333**	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND grade of D or better in CSE101,ECE100,200,EEE101 AND grade of D or better in CSE120 or EEE120 or be currently enrolled.
EEE	**334**	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student and a grade of D or better in ECE201 or EEE202
EEE	**335**	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Gate sizing, timing analysis, sequential digital circuits. Amplifiers, multi-stage op-amps, A/D, D/A converters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; Must have completed EEE 334 or ECE 334 with a grade of D or better or be currently enrolled in EEE 334

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EEE	**341**	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE student; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203; EEE 241 completed with D or better (or MAT 362 completed with a grade of C or better) or currently enrolled in EEE 241
EEE	**350**	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203, EEE 303 or MAE 317 completed with a D or greater or currently enrolled in EEE 203 or MAE 317 or co-enrolling in EEE 203 OR Graduate Engineering students
EEE	**352**	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE students; MAT 362 with C or better or EEE 241 with a D or better or currently enrolled; PHY 241 or 361 with a C or greater or currently enrolled; CHM 114, 115, 116 or 118 with a D or greater or currently enrolled
EEE	**360**	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student; EEE 202 or ECE 201 completed with a D or better or currently enrolled in EEE 202; EEE 241 completed with a D or better or currently enrolled OR Graduate Engineering student
EEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**404**	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 (or EEE 303) with D or better; EEE 230 (or CSE 230, EEE 225 or EEE 226) with D or better
EEE	**407**	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a D or greater or currently enrolled in EEE 203; MAT 342 or 343 completed with a C or greater or currently enrolled
EEE	**425**	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or better or currently enrolled
EEE	**433**	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or greater or currently enrolled
EEE	**434**	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 241 or EEE 340 completed with a grade of D or better or currently enrolled in EEE 241; EEE 352 or ECE 352 completed with a grade of D or better or currently enrolled in EEE 352
EEE	**435**	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Must be an Engineering BS/BSE student AND earn a grade of D or better in EEE 436 or be co-enrolled in EEE 436.
EEE	**436**	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 352 or ECE 352.
EEE	**437**	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 436 with D or better
EEE	**439**	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students and a grade of D or better in EEE 435.
EEE	**443**	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 341 with D or better
EEE	**445**	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**448**	Fiber Optics	Principles of fiber-optic communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 340 or EEE 341 completed with a D or better or currently enrolled in EEE 341
EEE	**455**	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE; EEE 350 completed with a D or better or currently enrolled; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203
EEE	**459**	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE and a grade of D or better in EEE 202 or 203.

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EEE	**460**	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in PHY241, 294 or 361 OR a grade of D or better in CHM114, 115 or 116 and a grade of C or better in MAT 274 or 275 and a grade of C or better in PHY241 or 361.
EEE	**463**	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; CHM 114 or CHM 116 with D or better or currently enrolled; MAT 274 or MAT 275 with C or better or currently enrolled; MAE 240 (or ECE 340) with D or better or PHY 241 with C or better or currently enrolled
EEE	**470**	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**471**	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**472**	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisite: BS/BSE Engineering Students; EEE 203
EEE	**473**	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students AND a grade of D or better in EEE 360 or currently enrolled.
EEE	**480**	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in EEE203 or MAE318 or be currently enrolled.
EEE	**481**	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203 and EEE 230 (or CSE 230) with D or better or only MAE 318 with D or better
EEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**488**	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE student; ENG 102 (or 105 or 108), EEE 241, EEE 350, EEE 334, and 4 courses from EEE 304, 333, 335, 341, 352 or 360, all with D or better
EEE	**489**	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE students; EEE 488 with D or better or be currently enrolled. Seniors or PostBacc undergraduates only.
EEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-6		Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	0-6	L	Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering BS/BSE student and a grade of D or better in EEE 433.
EEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-7		Pre-requisites: Engineering BS/BSE students only.
EEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		Pre-requisites: Senior Electrical Engineering BSE students only.
EEE	**505**	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students only.
EEE	**506**	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**507**	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**508**	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**509**	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**510**	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**511**	Artificial Neural Computation Systems	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in CHE 518, MSE 518, or MSE 475 you may not enroll in EEE 518
EEE	**523**	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**524**	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**525**	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**526**	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**527**	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG/MS/MSE/PHD/MCS students OR Science & Engr Of Materials students AND a grade of C or better in EEE 523.
EEE	**530**	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**531**	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**532**	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or be currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**533**	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**534**	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**535**	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**536**	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**537**	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**538**	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**539**	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**540**	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**541**	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**543**	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.

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EEE	**544**	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**545**	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**546**	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**547**	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**548**	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**549**	Lasers	Theory and design of gas, solid, and semiconductor lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**550**	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**551**	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**552**	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**553**	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**554**	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**555**	Modeling and Performance Analysis	Modeling and performance analysis of stochastic systems and processes such as network traffic queueing systems and communication channels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**556**	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**557**	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**558**	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**562**	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**563**	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**564**	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**571**	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**572**	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**573**	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**574**	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**575**	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate Engineering student
EEE	**577**	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**579**	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**581**	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**582**	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**585**	Digital Control Systems	Analysis and design of digital and sampled data control systems, including sampling theory, z-transforms, the state transition method, stability, design, and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**586**	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**587**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**588**	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Master of Engineering or Electrical Engineering MS/MSE/PHD students
EEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students, or Nuclear Power Generation Certificate
EEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		

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EEE	**606**	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**607**	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**625**	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**627**	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**631**	Heterojunctions and Superlattices	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**641**	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**643**	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**647**	Microwave Solid-State Circuit Design II	Practical design of microwave free-running and voltage-controlled oscillators using Gunn and Impatt diodes and transistors; analysis of noise characteristics of the oscillator.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**686**	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, Electrical Engineering MS/MSE/PHD students
EEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**731**	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Electrical Engineering PhD students
EEE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EEE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		
EEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		
EET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**301**	Electric Circuit Analysis II	Analysis of continuous-time signals and linear systems of using Laplace and Fourier response of circuits.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; EET 208 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**304**	Transmission Lines in Computer Networks	Theory and application of transmission lines in high-speed computer networks. Signal propagation and impedance matching.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		
EET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**396**	Professional Orientation	Technical, professional, economic, and ethical aspects of electronics/computer engineering technology practice and industrial organization.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
EET	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; MAT 262 or MAT 272 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**403**	PLCs, Sensors and Actuators	Applications, programming, and troubleshooting using PLCs. Interfacing to motors, sensors, and actuators. Fluid power principles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**406**	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3-4		Pre-requisites: EST 310 and MAT 267(or MAT 272). If you have credit for EET 506, you may not enroll in EET 406
EET	**407**	Energy Conversion and Applications	Electricity, magnetism, mechanics, heat and units, and three-phase circuits. Electrical machines, transformers, generation, transmission, and distribution of electrical energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: Technology and Innovation student, Minimum ASU GPA of 2.25; EET 208 OR Graduate Tech and Innovation student
EET	**410**	Electronic Circuits II	Analysis and design of OP-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; EET 301 and EET 310 with D or better OR Technology and Innovation or Fulton Engineering graduate student or TS/ES non-degree student
EET	**430**	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Students who have credit for EET 530, may not enroll in EET 430
EET	**460**	Power Electronics	Analyzes circuits for control and conversion of electrical power and energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: EST 310
EET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**501**	Digital Signal Processing Applications	Applies DSP techniques to the design and analysis of digital filters. Solution of filtering problems using computer techniques.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**506**	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate status. If you have credit for EET 406, you may not enroll in EET 506
EET	**508**	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**530**	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Students who have credit for EET 430, may not enroll in EET 530

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EET	**560**	Industrial Electronics and Applications	Analysis, design, and application of special electronic devices and systems to industrial control, power, communications, and processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**578**	Digital Filter Hardware Design	Hardware design of FIR and IIR filters, including adaptive filters, based on DSP chips. Develop new applications using DSP microprocessor systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**579**	Digital Image Communication	Image capture, transform, compression, storage, and transmission. Provides computer environment (software and hardware) to emphasize the practical aspect.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EGR	**101**	Introduction to Engineering Design I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
EGR	**102**	Introduction to Engineering Design II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: EGR 101 and MAT 170; Pre or Co-requisite: ENG 101 (or ENG 105, 107 or 111)
EGR	**104**	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 101, ENG 105, or 107
EGR	**126**	Engineering Applications of MATLAB	Using MATLAB to solve engineering problems; problem solving; computational and programming uses of MATLAB.	N	STO	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 with D or better
EGR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**201**	Fall Multidisciplinary Project	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**202**	Spring Multidisciplinary Project	Design, problem solving, and engineering practice developed in a multidisciplinary project setting. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**220**	Computer Hardware for Engineers	Computer architecture, types of memory, operating systems and interrupts, buses and multiplexing, error detection and correction, Internet, the Web, encryption.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**221**	Engineering Mechanics: Statics	Introduces the concepts of force, moment, and their relationships to the static equilibrium of a physical object.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**222**	Mechanics of Materials	Behavior of solid bodies subjected to loading. Stresses, strains, and displacements in bodies Analysis and design in solid mechanics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**223**	Engineering Thermodynamics	Heat; conservation of energy; first and second laws of thermodynamics; open and closed systems; entropy, enthalpy, and internal energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and CHM 113
EGR	**224**	Engineering Materials Selection	Methods of selecting materials for specific applications based on mechanical loading, electrical, thermal, and environmental constraints.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102 and PHY 121
EGR	**225**	Instrumentation I	Introduces instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher; EGR 102
EGR	**226**	Engineering Applications of LabView	Uses LabView to solve engineering problems; problem solving, data acquisition, and control using LabView.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**227**	Manufacturing Processes I	Overview of manufacturing processes, including operating principles, process selection, and production economics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102
EGR	**229**	Engineering Ethics and Professionalism	Case studies in engineering ethics and professionalism.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 101 and ENG 101
EGR	**230**	Fluid Mechanics	Fluid properties, fluid statics, fluid continuum systems, control volumes, boundary control surfaces, energy and momentum, hydraulics, pipes, open channels, turbomachines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221
EGR	**231**	Engineering Mechanics: Dynamics	Rectilinear and planar motions of a particle and their relationships to the forces on it.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**234**	Structure and Properties of Engineering Materials	Relationships among material structure, processing, and properties. Mechanical, electrical, and magnetic properties. Corrosion.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: CHM 113; MAT 170 or higher
EGR	**235**	Instrumentation II	Frequency domain analysis of instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 225 and APM 265 (or APM 270, or MAT 265, or MAT 270)
EGR	**238**	Feedback Control	Introduces modeling, analysis, and design of feedback control systems, including block diagrams, transient responses, and linear controllers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**239**	Engineering Economics	Economic dimensions in the evaluation of engineering alternatives. Income and cash flow. Time value of money. Cost/benefit analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102; MAT 170 or higher

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EGR	**280**	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites: APM 265, APM 270, MAT 265 or MAT 270
EGR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**301**	Fall Concentration Project	Design, communication, and critical thinking developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**302**	Spring Concentration Project	Design, engineering practice, and communication developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 102, EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**311**	Computer Aided Design for Land Development	Computer-aided design, 3D AutoCAD, drafting methods and drawing formats for land development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 301
EGR	**322**	Soils Engineering for Land Development	Soils engineering; soil classification, properties, and stresses; design and analysis of seepage, slopes, and foundations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 302
EGR	**324**	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment; structural modeling, analysis, and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 221; EGR 222
EGR	**331**	Electrical Implementation Technology	Conducting electrical projects using the facilities of the ASU Polytechnic campus. Juniors majoring in engineering or technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 or EET 301
EGR	**332**	Electrical Power and Heat	Generation and distribution of electrical power within localized systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**333**	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**335**	Instrumentation III	Noise in electrical systems and associated limits on instrumentation and measurement.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235
EGR	**336**	Introduction to Mechatronics	Pneumatic, hydraulic, mechanical, and electrical actuators. Models of mechatronic systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 231, EGR 235 and EGR 238
EGR	**337**	Remote Sensing and Imaging Principles	Remote sensing and imaging principles with a focus on land development applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): CHM 113; EGR 280; MAT 267, MAT 272, or MAT 294/APM 294-Mathematics of Change III
EGR	**339**	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli¿s equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: PHY 111 or PHY 121 with D or better; APM 266, APM 271, MAT 266 or MAT 271 with D or better
EGR	**341**	Testing and Failure Prevention	Testing behavior of engineering materials under various loads. Evaluation of causes, mechanisms, and prevention of failure in structures and components.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**342**	Computer-Aided Engineering	Theory and use of computer tools for high-level engineering analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**343**	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 221 and EGR 222
EGR	**346**	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 343
EGR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**401**	Engineering Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.	L	Pre-requisites: EGR 301 and EGR 302
EGR	**402**	Engineering Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Prerequisite(s): EGR 401 taken within one previous term
EGR	**423**	Land Development Engineering I	Identifies engineering issues in land development. Introduces site design, transportation planning and traffic engineering, roadway design, and environmental engineering. The role of the engineer in the design of the planned environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Co-requisite: EGR 401
EGR	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 340; Students who have credit for MET 432, may not enroll in EGR 432
EGR	**433**	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275; MAT 342 or MAT 343
EGR	**434**	Digital Signal Processing: Media Standards	Introduces signal compression and reconstruction; audio, image, and video media standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**435**	Digital Signal Processing: Filtering	Introduces digital filtering, FIR and IIR filters, filter design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**436**	Wireless Communication Principles	Introduces wireless digital communications systems; overview of important concepts, including coding, modulation, equalization, decoding, and multiple access protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**437**	Wireless Communication Protocols	Surveys commercially important digital wireless protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433

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EGR	**438**	Electromagnetic Compatibility and Interference	Electromagnetic compatibility and interference. Grounding and shielding techniques. Cables, connectors, and leads. Regulations and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 and PHY 331
EGR	**445**	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 301 or EGR 302
EGR	**492**	Honors Directed Study		N	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-6		
EGR	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
EGR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1.		
ELL	**515**	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELL	**516**	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**501**	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**502**	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport. Prerequisite: ELS 501 or Instructor Approval.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: ELS 501
ELS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
ELS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
ELS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EN	**106**	Lit Apprec		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
EN	**584**	Internship		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
ENE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

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ENE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
ENE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**111**	Learning Community Composition I	Discovering, researching, and developing ideas in relation to the writer's purpose, subject, and audience. Only taught within a Liberal Arts (CLAS) Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**112**	Learning Community Composition II	Critical reading and writing; emphasis on rhetorical strategies of argumentation. Requires research paper. Only taught within a CLAS Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 101 or ENG 111 with C or better
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		

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ENG	**197**	Medical Writing	For students in the MedStart summer program. Designed to further critical thinking, reading, and writing skills for students interested in a medical career.	N	LEL	N	GNA	Liberal Arts and Sciences	Department of English	3.		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**302**	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**307**	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210 with C or better
ENG	**312**	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**313**	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**315**	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**325**	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**326**	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**330**	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**331**	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**342**	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**345**	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**355**	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**356**	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**370**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Must have 35 or more earned hours. Students who have credit for BIO 315, may not enroll in ENG 370
ENG	**371**	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
ENG	**372**	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**374**	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**385**	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & H	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**413**	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 with C or better. Students who have credit for LIN 517, may not enroll in ENG 413
ENG	**414**	Studies in Linguistics	Relationship of linguistics to literature, gender, power, and other social issues.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisite: ENG 200 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**416**	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**419**	English Literature in the Early 17th Century	Topics, authors, and themes in English literature, 1603-1660.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**422**	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**426**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ENG	**427**	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**428**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ENG	**429**	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**430**	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**434**	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**436**	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**442**	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**444**	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**445**	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**447**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200; ENG 200-level literature course,or SLC 202, or FMS 100; FMS 200 . Students who have credit for SLC 450 or FMS 442 may not enroll in ENG 447
ENG	**448**	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**452**	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**453**	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**458**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
ENG	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**465**	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**469**	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**470**	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**474**	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**475**	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & G	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**480**	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**487**	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Poetry or ENG 387 with C or better; Students who have credit for ENG 411 Poetry may not enroll in ENG 487
ENG	**488**	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Fiction or ENG 388 with C or better; Students who have credit for ENG 411 Fiction may not enroll in ENG 488
ENG	**490**	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Poetry or ENG 487 with C or better; Students who have credit for ENG 495 Poetry may not enroll in ENG 490
ENG	**491**	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Fiction or ENG 488 with C or better; Students who have credit for ENG 495 Fiction may not enroll in ENG 491
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**495**	Literary Forms: Theory and Practice	Types, history, analysis of traditional forms and contemporary adaptations. Separate sections for poetry, fiction. Each genre may be taken once.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411 with C better
ENG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**502**	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**503**	Comparative Literature, Theory, and Practice	Problems, methods, and principles of comparative analysis, illustrated by selected critical essays and literary/cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**504**	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**505**	Writing Workshops	Intense poetry and fiction workshops for experienced writers, emphasizing individual style. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**506**	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**507**	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 480, may not enroll in ENG 507
ENG	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**530**	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**531**	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**532**	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**533**	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**534**	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**535**	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**536**	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**537**	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**538**	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**539**	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**540**	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**542**	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**543**	Studies in Anglophone Literatures	Selected topics, texts, periods, literary trends in works by world authors writing in English.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**544**	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**545**	Studies in Women's Literatures	Selected topics, texts, periods, and figures in works written by and/or about women, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**546**	Gender Studies	Selected topics, periods, and themes in the study of gender and sexuality, including attention to theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**550**	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**551**	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**552**	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**553**	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**554**	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**556**	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**560**	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**561**	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**562**	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**563**	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

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ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
ENG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		
ENG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**597**	MA Capstone Seminar	The capstone seminar is required for MA students who choose the non-thesis option, which can consist of writing a research paper, designing curriculum, or developing a professional portfolio. Requires oral presentation of project.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
ENG	**602**	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**603**	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**604**	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**606**	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**632**	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**635**	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**636**	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**639**	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**642**	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**645**	Advanced Studies in Gender Issues	Seminar courses that consider the influence of gender on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**651**	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**652**	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**654**	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**661**	Advanced Studies in Film	Seminar courses on topics, genres, and figures in film studies, including technical and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**662**	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**663**	Fiction Genres	Creative writing courses in time and fiction, gothic fiction, myth in fiction, science fiction, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**664**	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**665**	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
ENG	**667**	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		

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ENG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
ENG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
ENG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
ENG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**305**	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**323**	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**386**	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisite:must have completed ENG 102, or 105, or 108 with a grade of C or better; or be currently enrolled in ENG 102, 105, or 108
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & H	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**410**	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**431**	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**432**	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**433**	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**437**	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**438**	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**450**	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**454**	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**455**	Contemporary Women Writers	Critical examination of literature by contemporary women writers. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**460**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**462**	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**463**	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**477**	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	230	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	243	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	244	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	334	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	344	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	359	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	366	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	368	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	373	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**376**	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**377**	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**378**	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**379**	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**382**	Digital Project Management for Humanities and Arts	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**383**	Digital Media in the Humanities and Arts	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**464**	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**466**	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**467**	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**468**	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**481**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Students who have credit for ENG 581, may not enroll in ENG 481
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**483**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
ENG	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**581**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for ENG 481, may not enroll in ENG 581
ENG	**583**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
EPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPA	**795**	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
EPD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
EPD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EDP 710, EDP 712 or EDP 714 with C or better
EPD	**710**	Current Research in Design	Review and critical evaluation of contemporary literature and method in architecture, building science, interior design, industrial design, and landscape architecture. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**712**	Current Research in Planning	Review and critical evaluation of contemporary literature and method in environmental planning, landscape ecology, urban design, and urban and regional planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**714**	Current Research in History, Theory, and Criticism	Review and critical evaluation of contemporary literature and method in the theory and history of architecture, design, and planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student

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EPD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
EPD	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
EPD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		
EPD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		
ESS	**501**	Environmental Social Science Theory and Practice I	First part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**502**	Environmental Social Science Theory and Practice II	Second part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ESS	**510**	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**513**	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ESS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ESS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ESS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ESS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
ESS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		
ESS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		
EST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**200**	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		Pre-requisites: Sophomore standing
EST	**210**	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJT's, FETs, op-amps.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)

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EST	**310**	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210
EST	**345**	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200
EST	**370**	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200; EST 210; UET 331
EST	**372**	Wireless Communication Systems	Components and signal processing for modern wireless communication systems, including major applications, problems, and new technologies.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: EST 310
EST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**482**	Industrial Practice: Internship/Co-Op	Specially assigned or approved activities in electronic industries or institutions. Requires report.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
EST	**490**	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
EST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Must have an University Cum GPA of 3.00 or greater; Must be a Tech Science or Engineering senior OR a Graduate, NonDegree or Post Bacc student
EST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior

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EST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
ETH	**100**	Introduction to Ethnic Studies	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	
ETH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**300**	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	
ETH	**310**	Research Methods in Ethnic, Racial, and First Nations Populations	Examines analytical tools and methodological approaches (ethnography, oral histories, digital-storytelling, information literacy) to study ethnic, racial, and first nations populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
ETH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ETH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ETM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**301**	Environmental Management	Focuses on knowledge and skills necessary to manage environmental programs. Perspectives include regulatory, individual, corporate, and consulting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**302**	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**303**	Environmental Regulations	Explores environmental laws, regulations, and directives. Addresses air, land, and water.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**360**	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**362**	Managing Natural and Technological Disasters	Federal, state, and local responses to emergencies. Management of mass casualties, evacuation, sheltering, and terrorism; declaration of emergency procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources. Cross-listed as FSM 363. Credit is allowed for only ETM 363 or FSM 363.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**364**	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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ETM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**401**	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**402**	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**406**	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**407**	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-E**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-M**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-E**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-M**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**428**	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	
ETM	**460-E**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**460-M**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**461**	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy. Credit is allowed for only ETM 461 or 561. Prerequisite: junior or senior standing or instructor approval.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**468**	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**469**	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**501**	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**502**	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**503**	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**504**	Technology for Storage, Treatment, and Disposal of Hazardous Materials	Current and state-of-the-art technologies and future trends for storage, treatment, and disposal of hazardous materials and waste.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**505**	Quantitative Analysis and Practical Laboratory Techniques	EPA methodologies for sampling and analysis of soils and water. Includes quality assurance and regulatory requirements. Lab is arranged off site.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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ETM	**506**	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**507**	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**520**	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**522**	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**523**	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**524**	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**525**	Risk Assessment for Hazardous Materials	Applies the risk assessment process in situations ranging from hazardous facilities regulation to toxic substances in the environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**526**	Current Environmental Technology Issues	In-depth study of current issues in environmental technology facing both the private and public sectors.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**527**	Environmental/Resources Regulations Concepts	Develops environmental regulations from common law to statutory requirements. Emphasizes Superfund, hazardous materials, toxics, and liability contracts.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**528**	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**540**	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**560**	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**561**	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program. Credit is allowed for only ETM 561 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**567**	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**571**	The Foundations of Homeland Defense and Security	The enemy, policies, key players, and legal issues surrounding homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**572**	Multidisciplinary Approaches to Homeland Defense and Security: Collaborating to Integrate	Multidisciplinary approach to prevention, mitigation, preparedness, response, and recovery from incidents of national significance.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**573**	Strategic Planning and Organizational Imperatives in Homeland Defense and Security	Efforts to integrate and mobilize government and private sector resouces for homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**574**	Special Topics in Homeland Defense and Security	Discusses contemporary challenges of asymmetric warfare, terrorism, and the virtual global battlespace, as well as emerging threats to homeland security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ETM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
ETM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
EVO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
EVO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**601**	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**610**	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

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EVO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
EVO	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
EVO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
EVO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
EXW	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
EXW	**105**	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week. fee	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**205**	Physical Activity Instruction: Intermediate	Intermediate-level instruction in a variety of physical activities. Continuation of EXW 105. Y grade only. May be repeated for credit. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must have completed EXW 105 with a C or greater
EXW	**212**	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	**214**	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major.
EXW	**215**	Physical Activity and Healthy Lifestyles	Applies principles of physical activity to personal fitness testing and program planning for people of all ages. Telecampus course. Not open to Exercise and Wellness majors or to students with credit ib EXW 325.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Non-EXW students; Credit is allowed for only EXW 215 or EXW 325
EXW	**216**	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Exercise and Wellness or Physical Education major
EXW	**300**	Foundations of Exercise and Wellness	Principles and foundations of fields of study related to health promotion, physical activity, and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: EXW 100 or KIN 100 with a D or better, or co-enrolled in EXW 100 or KIN 100

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EXW	**302**	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	
EXW	**305**	Physical Activity Instruction: Advanced	Advanced-level instruction in a variety of physical activities. Continuation of EXW 105. May be repeated for credit. Y grade only. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**310**	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-heath consumerism, and statistical analysis.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: Must be a Exercise Wellness student; must have completed MAT114, MAT117, MAT119, MAT142 or MAT170 with a C or greater
EXW	**311**	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**315**	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 and BIO 202 with C or better
EXW	**320**	Program Development and Leadership	Principles of planning, organizing, promoting, and leading fitness and wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**322**	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
EXW	**325**	Fitness for Life	Physical fitness and benefits of exercise with emphasis on self-evaluation and personalized program planning for a lifetime. Not open to students with credit in EXW 215 or 301.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students may not sign up for EXW 325 who have received a D or better in EXW 215 or EXW 301
EXW	**330**	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 with C or better
EXW	**335**	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementaion of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 and 202 with C or better
EXW	**342**	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**346**	Health Promotion and Program Evaluation	Introduces and applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 300 with C or better; EXW 342 with C or better
EXW	**350**	Substance Abuse and Addictive Behavior	Studies addictive substances, their pharmacology and effects. Psychosocial risk factors for, and consequences of, substance abuse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**380**	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: PGS 101 with a C or better; 30 credit hours or more
EXW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**400**	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**420**	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**425**	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 315 with C or better; EXW 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	**442**	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites:EXW 300 with a D or better
EXW	**444**	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 300 and EXW 310 with a C or greater
EXW	**450**	Cultural and Social Issues in Exercise and Wellness	Examines contemporary sociocultural issues and social determinants of health and physical activity. Focuses on health disparities, obesity, and social stressors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	(L or SB) & C	Pre-requisites: PGS 101 and EXW 300 with C or better
EXW	**460**	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	FLD	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Exercise and Wellness concentration students with EXW 400, 420, and 425 with C or better or EXW Health Promotion concentration with EXW 346, and 444 with C or better
EXW	**492**	Honors Directed Study		N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
EXW	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
EXW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		

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EXW	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**501**	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**505**	Applied Exercise and Wellness Laboratory Techniques	Investigative techniques used in the applied exercise testing/prescription lab. Emphasizes cardiorespiratory assessment, energy balance, body composition, and electrocardiography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**534**	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**536**	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**538**	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**540**	Psychosocial Issues in Exercise and Wellness: Stress, Coping, and Resilience	Critically explores the impact of psychological and social factors on human wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**542**	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**544**	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**635**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**640**	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**641**	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**642**	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 500 and EXW 501 with a C or greater
EXW	**643**	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**645**	Biostatistics in Physical Activity, Nutrition, and Wellness	Introduces biostatistical methods in physical activity, nutrition, and health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**701**	Research Methods for Community-Based Interventions	Develops skills to design and conduct community-based research interventions, identify essential elements of program fidelity, analyze quasi-experimental research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
EXW	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
EXW	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
EXW	**218**	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	Nursing & Health Innovation	Department of Exercise and Wellness	2.		Pre-requisite: Exercise and Wellness or Secondary Education (Physical Education) major
FAS	**101**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
FAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**361**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390 (or equivalent) completed with D or better or currently enrolled. Credit is allowed for only FAS 361 or SOC 391
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
FAS	**390**	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**431**	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for SOC 435, may not enroll in FAS 435
FAS	**440**	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisite: Must be an Honors student
FAS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		

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FAS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
FAS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
FAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**503**	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	DIS	N	GNA	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**531**	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**539**	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**570**	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**571**	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**572**	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**573**	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**574**	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**575**	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**576**	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**577**	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**578**	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**579**	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**581**	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		

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FAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
FAS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		
FAS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**421**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421
FAS	**436**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**445**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		

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FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	
FIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**300**	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ACC 241 or 242 or 271, and ECN 221 and ECN 212 with a grade of C or better.
FIN	**301**	Fundamentals of Finance	Introduces the basic concepts, principles, and tools of financial management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status; ACC 240, ECN 112 and QBA 221 with C or better
FIN	**302**	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W. P. Carey Finance major; ACC 241 or 242 or 271, ECN 221 and ECN 212 with a grade of C or better.
FIN	**303**	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; Must have ACC 241 or 271 , ECN 211 or 213, ECN 212 or 214, ECN 221 and MAT 211 or 271 with a grade of C or better.
FIN	**331**	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 241 or 242 or 271, ECN 212, and ECN 221 with C or better
FIN	**361**	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 302 with C or better
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Non-Finance students; Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree seeking student
FIN	**410**	Investments	Strategies and mechanics of investing in stocks, bonds, and derivatives. Topics include investment selection, portfolio management, financial markets, and institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Management student with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better
FIN	**411**	International Finance	Explores the environmental challenges facing financial managers in global financial markets and develops tools and techniques to meet such challenges.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt OR Int' Studies student; FIN 300 or 301 with C or better; GLB 301 with C or better
FIN	**412**	Financial Management	In-depth extension of core finance course. Typical topics include financial planning/control, risk and valuation, capital budgeting.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better; ACC 236 or 410 with C or better
FIN	**421**	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 303 or 361) with C or better
FIN	**427**	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better

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FIN	**431**	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**456**	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	G	Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**461**	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	L	Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**481**	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student with Honors status; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Finance	1-6		Pre-requisites: Must be an Honors student
FIN	**493**	Honors Thesis		N	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Pre-requisites: Must be an Honors student
FIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		
FIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	**502**	Managerial Finance	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Pre-requisites: ACC 502 with C or better; ECN 501 with C or better
FIN	**520**	Financial Modeling	Demonstrates how Excel programming techniques can be used to model and manipulate financial data, as applied to equities, options on equities, and options on bonds.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**521**	Investment Management	Valuation of equities and fixed income securities. Trading strategies and portfolio management. Performance evaluation. Trading mechanisms and market organization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**525**	Investment Strategies	Introduces theories and practices of the investment process. Covers the fundamental principals and applications of modern portfolio theory, risk-return relation, asset pricing models, investment performance evaluation, and stock and bond valuation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**527**	Derivatives and Risk Management	Characteristics and pricing of forwards, futures, swaps, options. Applies instruments for hedging strategies, corporate risk management, and capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**530**	Derivatives	Covers options, forward contracts, futures contracts, and swaps. Provides a good knowledge of how these contracts work, how they are used, and how they are priced.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**531**	Financial Markets and Intermediaries	Short-term and long-term fixed-income securities and their marketplaces, tools for bond portfolio and interest rate risk management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**540**	Financial Markets and Instruments	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**550**	Fixed Income Securities	Describes important fixed income securities and markets, and develops tools for valuing fixed income securities and managing interest rate risk. Covers traditional bonds and term structure concepts as well as fixed income derivatives and interest rate modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**551**	Applied Fundamental Analysis	Analysis of financial documents to determine quality of earnings. Forensic financial analysis to diagnose financial health and sustainable growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 and ACC 502 with a grade of C or greater or be currently enrolled
FIN	**556**	International Financial Management	Behavior of exchange rates, interest rates, inflation rates. Analyzes corporate exposure to exchange rate risk and hedging strategies. Multicurrency capital budgeting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater or be currently enrolled

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FIN	**560**	International Finance and Investments	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**561**	Strategic Financial Management	Capstone case-oriented course in strategic applications of corporate finance. Acquisition, allocation, and management of funds within the business enterprise.	N	DIS	N	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Graduate students only; Must have completed FIN 502 with a grade of C or greater
FIN	**570**	Portfolio Strategies and Hedge Funds	Introduces the principles of asset valuation from an applied perspective. Valuation of financial securities and portfolio management applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**581**	Advanced Valuation Methods	Analyzes practical aspects of valuing the enterprise using economic value added, free cash flow, and other financial techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
FIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**781**	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
FIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
FIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		

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FIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1.		
FIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-Finance student; Must have minimum 2.0 ASU cumulative GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
FMP	**201**	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	
FMP	**202**	Film and Media Production Crew	Provides opportunity to serve in various capacities on student film sets in order to obtain practical production experience. Practicum. Prerequisite: instructor approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
FMP	**220**	Final Cut for Filmmakers	Required 30-hour lab designed to teach students basic editing techniques utilizing the Final Cut Pro Suite of software.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisite: Film and Media Production student
FMP	**250**	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**300**	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	**318**	Directing for Film	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film and Media Production student; FMP 320 with C or better
FMP	**320**	Film and Media Post-Production	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be in Film and Media Production student; Completed FMP 300 (or THE 400) with a grade of C or better
FMP	**345**	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**417**	Business Ethics in Entertainment	Business and ethical practices of the entertainment industry; analysis of ethical decision-making techniques.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**480**	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	**481**	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**492**	Honors Directed Study		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
FMP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
FMP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor
FMP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Pre-requisites:Must be a Film & Media Production student
FMP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisite: Fine Arts Graduate student

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FMS	**100**	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**110**	Introduction to New Media	Explores the cultural effects of new media technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	
FMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**194**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	2.		
FMS	**200**	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & H	
FMS	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**209**	Screenwriting Fundamentals (online)	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Restricted to online Film and Media Studies students only
FMS	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**300**	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**302**	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**309**	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**312**	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**340**	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C & H	
FMS	**350**	Virtual Reality in Film and Media	Analyzes virtual reality in films, media, and fiction. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**351**	Emerging Digital Media	Analyzes modern cultural and digital technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L	Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**354**	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: FMS 100
FMS	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	**377**	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites:ENG 102(or ENG 105/108); FMS 100; FMS 309 with grades of C or better, or currently enrolled
FMS	**440**	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better

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FMS	**441**	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**442**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 200; ENG 200-level literature course, SLC 202 or FMS 100; FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
FMS	**450**	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**460**	Masculinity and Film	Examines the representation of masculinity and the male body in film. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**461**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**468**	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**480**	Globalization, Technology, and Culture	Studies the socio-political relationship between media and the evolution of globalization. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**481**	Entertainment Technologies	Applies academic and industry knowledge to simulate and to solve "real world" entertainment industry problems and needs.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**482**	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**483**	Techno-Entertainment Convergences	Uses historical and scientific methods to forecast future technological developments and use in the entertainment industry.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**490**	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
FMS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
FMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
FMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**502**	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504

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FMS	**507**	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**509**	Race, Sex, and Identity Online (Online)	This course is available online only. Investigates scholarly methods and studies focused on the intersection of race, gender, and sexuality online.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**511**	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**512**	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**520**	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	**521**	Semiotics of Popular Culture	Uses semiotics and cultural studies to uncover representations of alienation.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**522**	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FRE	**101**	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings. Credit is allowed for only FRE 101 or 111	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 101 if they have received a C or better in FRE101,102,201,202,205,311,312,321,322,411,412
FRE	**102**	Elementary French	See FRE 101. Credit is allowed for only FRE 102 or 111.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisite: FRE 101; May not sign up for FRE 102 if received a C or better in FRE 111,201,202,205,311,312,321,322,411,or 412
FRE	**107**	French for International Professions I	Accelerated alternative to FRE 101 and 102 or FRE 111. Functional approach. Emphasizes communicative competence for international professions. Credit is allowed for only FRE 107 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
FRE	**111**	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study. Credit is allowed for only FRE 111 or 101 or 102 or 107. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 111 if they have received a C or better in FRE 101,102,201,202,205,311,312,321,322,411,412
FRE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
FRE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**201**	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Student may not enroll in FRE 201 if received a C or better in: FRE202,205,311,312,321,322,411,412
FRE	**202**	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not sign up for FRE 202 if they have received a C or better in FRE205,311,312,321,322,411,412
FRE	**205**	Readings in French Literature	Designed to teach reading with facility and comprehension. Vocabulary building and textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: FRE 202: Students who have received a C or better in FRE 321 or 322, may not enroll in FRE 205
FRE	**207**	French for Business	Alternative to FRE 202. Functional approach. Emphasizes communicative competence for international professions. Not open to students with credit in FRE 202. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
FRE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**311**	French Conversation	Further practice in speaking French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 311, if they have received a C or better in FRE 411.
FRE	**312**	French Composition	Further practice in writing French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not enroll in FRE 312, if they have received a C or better in FRE 412
FRE	**315**	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 with a grade of D or better, or currently enrolled
FRE	**319**	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312 with a grade of D or better or currently enrolled
FRE	**321**	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & H	Pre-requisites:FRE 205, 312 with a grade of D or better or currently enrolled

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FRE	**322**	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:Completed FRE 205 & 312 with a grade of D or greater, or be currently enrolled
FRE	**325**	Introduction to French Film	Studies French artistic contribution from 1895 to present, with emphasis on recent films starting with the New Wave.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**411**	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 311 with a grade of D or currently enrolled & 6 hours of 300-level French
FRE	**412**	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312; 6 hours of 300-level French
FRE	**415**	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:6 hours of upper-division French
FRE	**416**	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	pre-requisites:6 hours of upper-division French
FRE	**421**	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 & 312 with a grade of D or better, or currently enrolled
FRE	**422**	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ASB 480, ENG 213 or SLC 400
FRE	**423**	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ASB 480, or ENG 213, or SLC 400, or SLC 201, or FRE 421 with D or better
FRE	**432**	Gay Identities in Modern French Literature	Examines the representation of homosexuals as well as the emergence of homosexuality as a theme in modern French literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of Dor better, and 6 hours of 300-level French courses
FRE	**441**	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**442**	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**445**	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**451**	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**452**	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**453**	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**461**	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**462**	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**471**	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 322 with a grade of D or better, and 6 hours of 300-level French courses
FRE	**472**	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:9 hours of 300-level French courses with a grade of D or better
FRE	**480**	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 412 with a grade of D or currently enrolled
FRE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**485**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 480 with a grade of D, or currently enrolled
FRE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
FRE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
FRE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

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FRE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**510**	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**521**	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**531**	Medieval French Literature	Readings in the epics, early drama, Roman courtois, and other representative literary genres of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**535**	Identity, Gender, and Society in Early Modern French Literature	Readings in French Renaissance literature with special focus on Rabelais, Montaigne, Marguerite de Navarre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**585**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FRE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**790**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
FSA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**502**	Managing Change in the Fire Service	Dynamics of organizational change and the effect change has on the delivery of fire services to the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**503**	Fire Service and the Community	Theoretical concepts of public service to build an understanding of how the fire service fits within the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student

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FSA	**510**	Fire Department Budgeting and Finance	Functions of budgeting and finance in fire departments within the context of the public sector.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**522**	Leadership in the Fire Service	Leadership theories analyzed in a variety of contexts within public and private organizations, then applied to the leadership challenges in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**530**	Public Policy in the Fire Service	Public policy and the fire services' role in the making of public policy in the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**540**	Applied Research Methods in the Fire Service	Research methods applicable to problems that arise in the fire service, including assessments of programs and customer service research.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**550**	Fire Service Program Management	Functions of developing and managing fire service programs. Designed for advanced students of fire service administration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**551**	Fire Prevention and Public Fire Education	Managing fire prevention organizations and administering fire prevention programs in a contemporary society.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**552**	Emergency Medical Services Administration	Complex issues of administering an Emergency Medical Services (EMS) division in a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**553**	Special Operations in the Fire Service	Focuses on the variety of special emergency services operations provided by contemporary fire departments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**554**	Emergency Fire Operations Administration	Delivery of emergency services to a community by a contemporary fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
FSA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
FSA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSE	**105**	College Adjustment and Survival	Explores career goals and majors. Emphasizes organization and development of study skills, including time management, stress management, and use of the library.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Freshman or Sophomore in the Ira A. Fulton School of Engineering
FSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**200**	Elements of Engineering Design	Advanced version of introduction to engineering for students who have not taken an introduction to engineering course. Credit is allowed for only FSE 200 or various program introduction to engineering courses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: A grade of C or better in PHY 121 or currently enrolled AND a grade of C or better in MAT 265 or 270.
FSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**301**	Entrepreneurship for Engineers	Overview of entrepreneurship, with emphasis on principles suitable for undergraduate engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: School of Engineering BS or BSE student; Minimum Junior standing
FSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: Engineering or Construction BS or BSE student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**399**	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisite: Engineering BS or BSE student
FSE	**400**	Creating and Launching a Technology Venture	Focuses on creative and logical processes involved in developing a business idea and investigating its market feasibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**401**	Intellectual Property for Technology Ventures	Provides basic understanding of legal issues likely to be encountered in a technology venture; practical approaches and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**402**	Operating a Technology Venture	Managing and leading technology ventures. Principles of organizing, planning, controlling, and leading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**403**	Entrepreneurship Practicum	Places students pursuing a Certificate in Technology Entrepreneurship with a practicing entrepreneur to learn about venture development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
FSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**501**	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	**502**	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**503**	Collaborative Innovation Management	Techniques and practices of collaboration innovation, including an indepth look at managing outsourcing relationships and "wikinomics."	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**504**	Corporate Venturing and Intrapreneurship	Explores how companies can create intrapreneurial cultures that lead to greater levels of corporate venturing and long-term competitiveness.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**590**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**594**	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: School of Engineering Graduate student
FSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**690**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**790**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		

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FSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		
FSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		
FSM	**304**	Fire Personnel Management	Promotion, personnel development, career and incentive systems, validation of physical requirements, managerial and supervisory procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**305**	Quality Emergency Services	Covers quality issues relating to services delivered by progressive fire departments. Covers management of personnel and resources during organizational change.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**306**	Fire Prevention Organization and Management	Examines and evaluates the techniques, procedures, programs, and agencies involved in preventing fires.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**307**	Fire Department Safety Organization and Management	Focuses on the management of fire department safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		
FSM	**308**	Fire Department Budgeting	Examines the role of fire department budgets and their relationship to other levels of government as a planning tool.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**309**	Emergency Medical Service Organization and Management	Focuses on the administration and management of emergency medical services delivered by a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**400**	Human Behavior and the Fire Threat	Proper ways of conducting post-fire interviews; emphasizes the psychological effects of communications during emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**401**	Labor Relations in the Fire Service	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**404**	Program Management and Accreditation	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**405**	Fire Service Leadership	Focuses on developing personal and organizational leadership qualities required to be successful in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**421**	Political and Legal Consideration in Fire Science	Study of legal and political considerations that affect the decision making of fire service managers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**425**	Fire Service Administration	Presents modern management and planning techniques that apply to organizing a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**460**	Incident Management Systems and Emergency Operations Center	Covers IMS, terminology, players, and management philosophy. EOC setup, activation, operation, and termination. EOC funding and politics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**493**	Honors Thesis	Capstone applied project. Applies knowledge learned from FSM course work to solve a practical fire service problem.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
FSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		

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GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SB & G	
GCU	141	Introduction to Economic Geography	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	200	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	322	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	323	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	325	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	326	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	327	Geography of Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	328	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	332	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	344	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	350	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	351	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	352	Political Geography	Relationship between the sociophysical environment and the state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	359	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	423	Geography of South America		N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	424	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	425	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or SB) & G	
GCU	426	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	432	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	433	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	441	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	442	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	444	Geographic Studies in Urban Transportation	Current urban transportation issues in metropolitan Phoenix. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	453	Recreational Geography	Examines problems surrounding the organization and use of space for recreation. Introduces geographic field survey methods of data collection and analysis.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	455	Historical Geography of U.S. and Canada	Geographical perspective on the evolution of the United States and Canada from pre-Columbian times to early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & H	
GCU	474	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	492	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	493	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		

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GCU	**495**	Quantitative Methods in Geography	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: MAT 119, 170, 210 or 270
GCU	**496**	Geographic Research Methods	Scientific techniques used in geographic research. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GPH 370 with C or better
GCU	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies. Seminar.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**515**	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**516**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GCU 516, PUP 560 or SOS 560
GCU	**526**	Spatial Land-Use Analysis	Determination, classification, and analysis of spatial variations in land-use patterns. Examines the processes affecting land-use change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**529**	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**542**	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**585**	Advanced Research Methods in Geography	Specialized research techniques and methodologies in economic, political, or cultural geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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

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GCU	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SB & G	
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites:must have completed MAT 117, or 119, or 142, or 170, or 210, or be currently enrolled in one of these
GCU	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

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GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**361**	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**373**	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation. fee	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SG	Pre-requisite: PSY 230 or SBS 304
GCU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SB & G	
GER	**101**	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar. Credit is allowed for only GER 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**102**	Elementary German	See GER 101. Credit is allowed for only GER 102 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**111**	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study. Credit is allowed for only GER 111 or both GER 101 and 102. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
GER	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**201**	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**202**	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**311**	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays, and stories. 3 semester hours limit for majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**312**	German Conversation	See GER 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**313**	German Composition	Intensive practice in writing, emphasizing style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**411**	Advanced Grammar and Conversation	Improvement of diction and idiom through intensive oral review.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	

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GER	**412**	Advanced Grammar and Composition	Improvement of writing ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:GER 313 with a grade of D or better or currently enrolled
GER	**415**	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**416**	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**421**	German Literature	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: 6 hours of 300-level German courses
GER	**422**	German Literature	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: 6 hours of 300-level German courses
GER	**453**	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	
GER	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
GER	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GER	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
GER	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**521**	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**523**	German Drama	Drama of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**527**	The Novelle	Special studies in the German short story.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
GER	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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GER	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
GER	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GIT	**110**	Technical Graphics	Representation of 2-D and 3-D geometry in orthographic, isometric, and oblique projection; detail, assembly, sectional, and auxiliary views; ANSI-standard lettering, and dimensioning for geometric and positional tolerance.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**135**	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**210**	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**212**	Computer-Aided Design and Drafting (CADD)	CADD for product design, representation, and documentation; includes projection theory, descriptive geometry, graphics analysis, drafting standards, and precision dimensioning techniques.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisite: GIT 110
GIT	**215**	Introduction to Graphics Programming	Graphic user interface planning and evaluation using industry-standard programming tools.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**230**	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**301**	Website Development for Nonmajors	Analyzes Web programming applications for non-GIT majors; emphasizes problem solving in structuring Web documents.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum 45 hours
GIT	**303**	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135, GIT 230
GIT	**312**	3-D Computer Graphics Modeling and Representation	3-D solid modeling applications: concepts, techniques, data structures, modeling strategies, assemblies, geometric representation.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisites: GIT 110, GIT 210, GIT 212
GIT	**313**	Technical Illustration and Photorealistic Rendering	Computer-generated graphics for technical illustration and design presentation: axonometric and perspective drawing; shading, shadowing, materials and textures; photorealistic rendering for PostScript output.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 110, GIT 230
GIT	**314**	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210, GIT 215, GIT 230
GIT	**333**	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digitial printing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: GIT 135, 230, 303
GIT	**334**	Image Capture and Manipulation	Theory and application of image capture techniques used for all copy formats and conversion processes required for reproduction or dissemination.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 230
GIT	**335**	Computer Systems Technology	Surveys computer-based technology covering hardware, software, storage, networking, Internet, telecommunications, and information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**337**	Web Content Design	Design principles for visual content on the World Wide Web using XHTML and CSS; raster, vector, fonts, portable documents, color palettes, and file format considerations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 210; GIT 215; GIT 230

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GIT	**352**	Technical Presentations	Technologies for planning, creating, and delivering individual and group presentations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**384**	Commercial Digital Photography	Digital image, conversion, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**411**	Computer Animation	2-D and 3-D computer animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210; GIT 312
GIT	**413**	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337. Pre or Co-Requisite: TWC 400
GIT	**414**	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**415**	Computer Graphics: Business Planning and Management	Implementation planning: feasibility and application studies; needs assessment and operational analysis techniques; organization, managerial, and technology considerations; business plan development.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**417**	Advanced Internet Programming	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**418**	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 215, GIT 230, GIT 214, GIT 417
GIT	**432**	Graphic Industry Business Practices	Business practices related to press/prepress/Web industries; trade customs, cost analysis, marketing and management approaches.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333; GIT 337
GIT	**435**	Web Management and E-Commerce	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 414
GIT	**436**	Gravure Technology	The technologies and processes involved in the production of gravure publications with an emphasis on the design, imposition, decoration, and finishing of packaging.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 334
GIT	**437**	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 334
GIT	**441**	Graphic Information Systems	Graphic information systems common to the workplace: graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**450**	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 337
GIT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	FLD	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**498**	Professional Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
GIT	**537**	Current Issues in Quality Assurance	Directed group study of selected issues relating to quality assurance in the printing, publishing, and graphic information industries. Requires graduate group leadership.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**538**	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**540**	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)

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GIT	**541**	Graphic Information Systems	Graphic information systems common to the workplace; graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**542**	Information Design and Usability	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**301**	Business in the Global Environment	Discusses multinational corporate strategy, structure, operations, and the social and economic factors affecting global business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.	G	Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status.
GLB	**302**	Culture and Diversity Management	Develops an understanding of culture (individual, organizational, national, subcultural, transnational, and global) and change and interaction applied to management decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3-4		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**303**	Relationship Management	Overviews types of relationships found in organizations, then trains students in the interpersonal skills necessary to effectively manage those relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**401**	Global Business Integration	Provides an integrative framework for global corporate strategic analysis and opportunities for integrated decision making in actual and simulated businesses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: Global Mgt student with professional status; Minimum 87 hours; OPM 301 and (FIN 300 or 301) with C or better; MKT 300 or 301 with C or better; GLB 303, HRM 410 or MGT 301 with C or better
GLB	**411**	Global Competitiveness	Discusses factors contributing to international competitive success of nation-states, national industries, and specific firms. Includes detailed analysis of actual firms.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.		Pre-requisites: School of Global Management and Leadership International Studies student with Professional or Conditional status; GLB 301 with C or better
GLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
GLB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-6		
GLB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
GLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: School of Global Management and Leadership International Studies student with Professional or Conditional status
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ & G	
GLG	**102**	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. fee. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & H	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
GLG	**104**	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	Co-requisite: GLG 102
GLG	**105**	Introduction to Planetary Science	Solar system objects and their geologic evolution, surfaces, interiors, and atmospheres; weekly lab for data analysis and experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SG	

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GLG	**106**	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SQ	
GLG	**108**	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.		
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & G	
GLG	**111**	Geologic Disasters Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	
GLG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**300**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Not open to Geology majors with credit in GLG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**304**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**310**	Structural Geology	Geologic structures and the mechanical processes involved in their formation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 101 AND either MAT 270 or MAT 290 with a grade of D or greater
GLG	**321**	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisites: CHM 113 and (MAT 270 or MAT 290); Pre/Co-requisite: CHM 116
GLG	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only BIO or GLG 325
GLG	**362**	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**400**	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	P/F	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in geological sciences. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	C	
GLG	**404**	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		

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GLG	**405**	Geology of the Moon	Current theories of the origin and evolution of the moon through photogeological analyses and consideration of geochemical and geophysical constraints. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**406**	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**410**	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	Pre-requisites: GLG 101 or SES 101 with C or better
GLG	**412**	Geotectonics	Earthquakes, Earth's interior, formation of oceanic and continental crust, and plate tectonics. Emphasizes current work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better
GLG	**416**	Field Geophysics	Methods of applied geophysical exploration; seismic refraction, gravity, electrical resistivity, geomagnetics. Includes survey planning, data acquisition, processing, analysis, and interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**418**	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better; MAT 272 (or MAT 267); PHY 131
GLG	**419**	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: PHY 131
GLG	**420**	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**424**	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 321 with C or better
GLG	**430**	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 102 (or SES 102) with C or better; GLG 104 (or SES 104)
GLG	**435**	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 102 and GLG 321 with a grade of C or greater
GLG	**441**	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**451**	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	**452**	Field Geology II	Continuation of GLG 451. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 451 and GLG 321 with C or better; MAT 270 or MAT 290 with C or better
GLG	**455**	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona. Fee.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		
GLG	**456**	Cordilleran Regional Geology	Systematic coverage through space and time of the geological development of western North America, emphasizing the western United States. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**470**	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**490**	Topics in Geology	Special topics in a range of fields in geology. Fee.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
GLG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**495**	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GLG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**500**	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**501**	Geology of Arizona	Basic and historical geology, fossils, mining, energy resources, environmental problems, landscape development, and meteorites, cast in examples from Arizona. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**504**	Geology of the Grand Canyon	Reviews the discovery, history, origin, and geology of the Grand Canyon of the Colorado River in Arizona. 6-day field trip down the river (first 6 days after commencement in May) required at student's expense. Requires field research and term paper on trip.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2.		
GLG	**510**	Advanced Structural Geology	Mechanics of rock deformation, emphasizing relationship among field observation, theory, and experiment. Stress, strain, simple constitutive relationships, failure criteria, and the basis of continuum methods. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**520**	Advanced Physical Volcanology	Selected volcanologic topics, including explosive eruption processes, lava flow mechanics, and intrusive mechanisms. Fee.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	2-3		
GLG	**547**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		You may not enroll in GLG 547 if you have credit in BIO 515, or PAF 547, or SOS 516
GLG	**581**	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**582**	Physical Geochemistry	Applies thermodynamic and kinetic principles to geochemical processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

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GLG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ & G	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG & G	
GPH	**111**	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants. Credit is allowed for only GPH 111 or 411. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**210**	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**211**	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	

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GPH	**212**	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SQ	
GPH	**213**	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SG	
GPH	**214**	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SQ	
GPH	**215**	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SG	
GPH	**271**	Maps and Map Reading	Map types, uses, limitations, and evolution. Communication via paper and digital medium. Navigation, interpretation, projections, sources, symbols, classification, case, handling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**314**	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & G	
GPH	**370**	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**371**	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**372**	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**373**	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	CS	Pre-requisite: GPH 370 with C or better
GPH	**381**	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**401**	Topics in Physical Geography	Open to students qualified to pursue independent studies.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in discpline. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	
GPH	**405**	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**409**	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**410**	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**411**	Physical Geography	Introduces physiography and the physical elements of the environment. Credit is allowed for only GPH 411 or 111.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**412**	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111, MAT 270, PHY 121, and PHY 122 with C or better

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GPH	**413**	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**414**	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**418**	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
GPH	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH or PLB 422
GPH	**433**	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**471**	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**473**	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: Must have completed both GPH 373 and CSE 100 with a grade of C or greater or be currently enrolled
GPH	**474**	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	**475**	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**481**	Environmental Geography	Problems of environmental quality, including uses of spatial analysis, research design, and fieldwork in urban and rural systems.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**483**	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**491**	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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GPH	**505**	Energy and the Environment	Sources, regulatory and technical controls, spatial distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**511**	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation: emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**533**	Snow and Ice	Processes, distribution, climatic interactions of snow/ice emphasizing mass balance, snow stratigraphy/metamorphism and glacier/snowpack climatology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**573**	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**575**	Geographic Applications of Remote Sensing	Uses imaging and nonimaging methods of remote acquisition of data, including satellite sensors, airborne radar, multiband scanning, conventional photographic sensors, and ground-based equipment.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**596**	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**601**	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals. Module 1 of the fall semester for MAS-GIS professional degree program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**602**	Intermediate GIS	Intermediate GIS for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		

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GPH	**603**	Spatial Statistics and Modeling	Spatial statistics and modeling for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**604**	Implementation in the Corporate and Public Sectors	Uses GIS in the corporate and public sectors. GIS ethics. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**605**	GIS Project: Real-World GIS Project Planning and Implementation for Public Sector Agencies	GIS project development for the public sector. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**606**	Gis Project Presentation	Mastering technical project presentation for GIS professionals. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		
GPH	**610**	Programming the GIS Environment	Programming the GIS environment for the MAS-GIS program. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**620**	Remote Sensing	Remote sensing for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**630**	Air Photo Interpretation for MAS-GIS	Air photo interpretation for the MAS-GIS program. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**640**	GIS for Business	Uses GIS in business for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**650**	GIS for the Internet	GIS for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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GPH	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GPH	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GRA	**101**	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**111**	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
GRA	**112**	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 111 with C or better
GRA	**121**	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 111
GRA	**122**	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 121 with a C or better; Co-requisite: GRA 112
GRA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**220**	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	**221**	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	**222**	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	**223**	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	**224**	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	**225**	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**321**	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 361

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GRA	**322**	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	**345**	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Graphic Design, Architecture, Interior Design, Industrial Design, Housing Community Development or Design Studies BA; ENG 102, 105 or 108 with C or better
GRA	**361**	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	**362**	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**401**	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**421**	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	**422**	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	**423**	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422
GRA	**424**	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422 with C or better
GRA	**440**	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**461**	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	**462**	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
GRA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
GRA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

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GRA	**501**	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Science in Design or Ph.D. Design student
GRA	**526**	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**561**	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**562**	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the syntheis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: DSC 561 with C or better
GRA	**563**	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**581**	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
GRA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
GRD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Graduate College	1.		
GRD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
GRD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		
GRK	**101**	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GRK	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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GRK	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**201**	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: GRK 101 with C or better
GRK	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**301**	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 201 with C or better
GRK	**302**	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 301 with C or better
GRK	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
GRK	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GRK	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	**501**	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**503**	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**505**	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**506**	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
GTD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		
GTD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
GTD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		
HCR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**210**	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisite: ENG 102,105 or 108
HCR	**220**	Introduction to Nursing and Healthcare Systems	Introduces the social, political, and economic contexts in which the nursing profession and healthcare systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCR	**230**	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	C & G	
HCR	**240**	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate Nursing students; BIO 201, BIO 202, CHM 101 or higher, MIC 205 and MIC 206 with C or better
HCR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**550**	Principles of Epidemiology for Healthcare	Introductory graduate-level course intended to provide students with fundamental epidemiology concepts and methods which can be applied to their field of interest.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**561**	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**562**	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**563**	Clinical Research Management and Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**564**	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	**565**	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**566**	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**567**	Applied Cost-Effectiveness Analysis in Intervention Research	Principles and methods of cost-effectiveness analysis and the application to interpreting clinical trial and sociobehavioral intervention results	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or any graduate nursing program; HCR 561 and HCR 565 with D or better
HCR	**568**	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or certificate program
HCR	**569**	Applied Principles of Data Management & Inferential Statistics in Healthcare Research	Applied principles of data management and inferential statistics in epidemiological, psychosocial, medical, nursing, and healthcare research. Seminar. Prerequisites: DNP 679; HCR 572; NUR 609; admission to Clinical Research Management Certificate(NUCRGRCC) or master's program (NUCRMMS), any graduate nursing program.	N	SEM	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Certificate or Master's program or any graduate Nursing program; NUR 609, DNP 679 and HCR 572 with D or better
HCR	**570**	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**571**	Cultural Diversity in Clinical Practice	Introduces culturally diverse aspects of clinical care, including culture bound syndromes folk practices, appropriate assessment approaches, and client/provider interaction.	N	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HCR	**572**	International Health Capstone Project	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
HCR	**573**	Principles of Health Science Research	Orientation to translational health sciences research methods, creating transdisciplinary research terms, and implementing transdisciplinary translational research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student
HCR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HCR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HDA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HDA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7		
HDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
HEB	**102**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: HEB 101 with C or better
HEB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**201**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 102 with C or better
HEB	**202**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 201 with C or better
HEB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**313**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 202 with a grade of C or greater or be currently enrolled
HEB	**314**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: Must have completed HEB 313 with a grade of C or greater or be currently enrolled
HEB	**375**	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
HEB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HEB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
HEB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
HEB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
HED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Institute & Grad Sch Education	Adv Stud Eductnl Policy, Leadership & Curriculum T	1-12		
HED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**510**	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-4		
HED	**527**	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**602**	Institutional Research/Strategic Planning	Provides an overview of policy research and planning in higher education at the campus system and governing/coordinating agency levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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HED	**611**	Curriculum and Instruction	Curriculum development, instructional organization, and improvement of instruction in higher education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**620**	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**634**	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**644**	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**649**	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
HED	**679**	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**687**	Governance, Coordination, and External Influences in Higher Education	Study of governance and coordination in higher education systems and the impact of external forces on them.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**688**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**689**	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
HED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**701**	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student

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HED	**702**	Critical Policy Issues In Higher Education	How great expectations in Washington are dashed in Oakland, Pressman and Wildavsky (1984) state that "policies imply theories--Whether stated explicitly or not, policies point to a chain of causation between initial conditions and future consequences." Policy can be broadly defined as a principal, plan, or course of action undertaken by governments, organizations, or individuals and designed to influence and determine decisions and actions. Many assumptions made by policy makers and other constituencies as well as competing social and political considerations shape the development of policy in higher education. Given the importance of federal and state public policy-making to higher education, we examine the effect of public policy on the functioning of colleges and universities and explore the various facets of public policy issues. Examines critical policy issues for higher education and the assumptions underlying their development.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**703**	Institutional Research and Evaluation in Higher Education	Higher education professionals (e.g., administrators, faculty, and researchers) are expected to develop an understanding of and appreciation for the role of research, analysis, and evaluation. Institutional research and evaluation are important functions in the advancement of colleges and universities. These functions help to maintain efficacy within educational organizations by providing vital data and analysis used in planning, decision-making, and policy development. Designed to develop a deep understanding of the contextual and practical applications of research and evaluation within higher education institutions. Students develop skills and execute techniques that are critical to conducting institutional research and evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**704**	Qualitative Case Study Approaches For Policy Research In Higher Education	Provides advanced graduate students with instruction in qualitative case study research approaches as applied to questions of higher education policy. Emphasizes individual and group interviewing as techniques for qualitative case study data collection, coding, and analysis. Particularly useful for advanced doctoral students who plan to conduct a qualitative dissertation related to a higher education policy topic.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**705**	Ethics, Diversity, and Educational Leadership in Higher and Postsecondary Education	Students read and discuss recent writings on ethical decision making as related to the context of higher and postsecondary education. According to Shapiro & Gross (2008), "educational leaders have always had to make important decisions that affect the studies and lives of the next generation." St. John (2009) underscores the importance to ethical practice of understanding critical higher education issues in organizational practice, the gaps between moral beliefs and actions, and improving equity in organizations. Doctoral students review theoretical concepts related to ethical decision making and apply them to moral dilemmas in higher and postsecondary education leadership, policy-making, and organizational change.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**707**	Higher Education Institutional Types and Innovative Initiatives	Students gain an in-depth understanding of the various types of higher and postsecondary education institutions in the United States, including two-year and four-year colleges and universities, historically Black colleges and universities (HBCU's), Hispanic-serving institutions (HSI's), tribal colleges, women's colleges, faith-based colleges, and for-profit colleges. Covers current classification system used to group each institutional type. Examines the contribution of each institutional type to the development of American higher education, their current status, and potential futures. Studies exemplary programs, within various institutional contexts, that seek to address the academic needs of diverse student communities. Guest speakers and an out-of-state institutional site visit provide opportunities for students to interact with and learn from faculty and administrators within institutional contexts.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
HED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		
HES	**301**	Adult Fitness I	Physical fitness and benefits of exercise. Emphasizes fitness assessment and designing an individualized assessment program. Y/E grade only. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Credit is allowed for only HES 301, EPE 301,325, 494, HES 301or HES 494
HES	**302**	Adult Fitness II	Continuation of HES 301. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 completed with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 302
HES	**303**	Adult Fitness III	Continuation of HES 302. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 with Y grade; HES 302 with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 303
HES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
HHE	**510**	Theory of Healthcare Design	Theoretical problem solving and practical application strategies used in the design of healthcare and healing environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**524**	Contemporary Issues in Healthcare Design	Address contemporaneous healthcare design issues and challenges and propose theoretical solutions through evidence-based research. Seminar.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: HHE 510 and HHE 540 with B or better
HHE	**540**	Healthcare Design Typologies: Case Studies	Industry best practices and benchmarks for various types of hospital facilities and healthcare systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**566**	Healing Experience Studio	Connects spatial relationships and patient needs through design. Investigates user experience of space on a personal level. Studio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**591**	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
HHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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HIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**494**	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Honors students only; Total earned hours must be equal to or less than 60
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**274**	The Human Event: Social Science Focus	Continuation of HON 171 from the Renaissance through the modern period; emphasizes the development of the social sciences.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or SB) & H	Pre-requisite: HON 171 with C or better
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**298**	Honors Directed Study		N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**310**	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**317**	Philosophers, Poets, and Revolutionaries in Latin America	A transdisciplinary honors course that introduces students to major intellectual currents in three regions of Latin America.	N	DIS	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**366**	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	FLD	Y	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**371**	Freedom and Authority	Historical overview of concepts of liberty, responsibility, and power in Western societies, emphasizing 18th- to 20th-century developments.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**372**	French Cultural Influences	Explores textual and cultural artifacts formative of French culture as a series of contacts and conflicts with other peoples and lifeways.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & G	
HON	**373**	Heroes, Heroines, and Villains	Examines concepts of heroic and villainous characteristics as expressed in the literature and visual arts of various cultures throughout history.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**374**	Black and White Atlantic	Examines development (18th- to 20th-century) and cultural manifestations of Black/White race relations within the U.S. and between the U.S. and other nations.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**375**	Science and the Modern Self	Concentrates on texts of the 19th and 20th centuries; explores how scientific discourse determines our notions of self.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**376**	Law, Literature, and Life	Multidisciplinary approach to the subject of law, examining it through literature, history, and legal philosophy.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	

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HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	Pre-requisites: Honors students only
HON	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L or HU	
HON	**378**	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & H & G	
HON	**379**	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**410**	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-12		Pre-requisite: Barrett Honors student
HON	**485**	Biosphere 2; Study Opportunity	For students participating in the ASU-sponsored program at Biosphere 2.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-18		
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisite: Honors students only
HON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-7		Pre-requisites: Honors students only
HON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-15		
HPS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**311**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU or SB	
HPS	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	**322**	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	

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HPS	**323**	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**325**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H & G	
HPS	**330**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**331**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
HPS	**332**	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**336**	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SB & H	
HPS	**340**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for BIO 311 or HPS 340
HPS	**377**	Nature in Context	Explores perspectives on the nature of nature, the history of ecology, and the rise of environmentalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**402**	Technology, Society, and Human Values	Values that motivate humankind to create technology. Areas of conflict and resolution of conflict between values and technology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**410**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
HPS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
HPS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
HPS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
HPS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**512**	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**513**	Decisions and Strategies	Explores topics in decision theory, game theory, social choice theory, epistemology, and related fields. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**550**	Methods in History and Philosophy of Science	Introduces current methods in the practice of history and philosophy of science. Organized around major historiographical schools in the history of science such as social, institutional, intellectual, cultural, or feminist history of science and current concerns in philosophy of science such as causation, explanation, modeling, and epistemology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**610**	History and Philosophy of Science Lab	This course brings together graduate students, postdocs, and faculty members in HPS. Sessions include panel discussions of HPS topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
HPS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
HPS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
HSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**210**	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
HSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**300**	Complementary Healthcare	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: HSC 210 with D or better
HSC	**320**	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Sophomore, Junior or minimum 30 hours; PHI 101
HSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**420**	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: STP 226, PSY 230, PSY 231, POS 401, SOC 390, STP 231 or STP 420

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HSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		
HSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSD	**501**	Theories of Science and Democracy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**502**	Analysis of Knowledge and Expertise in Policy Decisions	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**503**	Analysis of Scientific and Technological Innovation	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**504**	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Graduate College	Graduate College	3.		
HSD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
HSD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		
HSD	**601**	Core Seminar I	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**602**	Core Seminar II	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Graduate College	Graduate College	4.		
HSD	**610**	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions. May be repeated for credit for a total of 6 hours.	N	SEM	Y	OPT	Graduate College	Graduate College	1.		
HSD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		
HSD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Graduate College	Graduate College	1-12		
HSD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		
HSD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		
HSD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-15		
HSM	**220**	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	H	
HSM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**493**	Honors Thesis		N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
HSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**502**	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**505**	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 561 or ECN 501 with C or better.
HSM	**512**	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better

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HSM	**522**	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**542**	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**561**	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**564**	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**565**	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**566**	Managerial Epidemiology II	Basic principles of epidemiology, evaluation of etiology, natural history, intervention therapy, and disease prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**575**	Health Policy Management and Evaluation	Provides students with the analytical techniques and real world experience to manage the implementation and evaluation of changes in health policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		
HSM	**578**	Managing Clinical Trials	Introduces students to theoretical and practical aspects of randomized controlled clinical trial methodology.	N	LEC	N	GRD	W.P. Carey School of Business	Department of Economics	3.		Pre-requisite: HSM 505
HSM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**589**	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**105**	Slavic Civilization	Development of Slavic cultures and societies from medieval Byzantium to the present; introduces modern Eurasia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**106**	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	

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HST	**108**	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**200**	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**201**	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**202**	Historical Themes in Europe	General introduction to selected themes in European history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**211**	American Jewish History	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Pre-requisites: Students who have credit for SSH 301, or ASB 301 may not enroll in HST 301
HST	**302**	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**303**	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**304**	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**305**	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**306**	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**307**	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**310**	Film as History	Surveys moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
HST	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**316**	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**321**	Constitutional Hist/US to 1965	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**323**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**329**	Women in 20th-Century US West	Examines how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H & C	
HST	**330**	Mexican Women in the U.S.	Overview of Chicana history from Mesoamerican origins to the present, focusing on Mexican women in the western U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**333**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	

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HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**347**	Ancient Greece	History and civilization of the Greek world from 650 BCE to the death of Alexander the Great.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**348**	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**349**	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**350**	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**351**	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**353**	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**354**	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**356**	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**357**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
HST	**358**	Jewish History from the Bible to 1492	Continuity and change in political, legal, economic, and sociocultural history of the Jews from biblical through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**359**	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**366**	England to 1689	Political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**367**	Modern Britain	Political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**370**	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**371**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**372**	Modern Middle East	Impact of the West and modernization upon Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**376**	Modern Latin America	Nationalistic development of the independent republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**377**	Women in Colonial Latin America	History of women in colonial Latin America, cross-examining class, race, and gender relations in depth.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	
HST	**378**	Latin American Women: The National Period	Surveys the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**379**	Rebellion & Revolution/So Amer	Political, economic, and social development of Spanish-speaking nations in South America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**380**	Cultural History of Latin America	Main currents of thought, the outstanding thinkers, and their impact on 19th- and 20th-century Latin America. Cultural and institutional basis of Latin American life.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**381**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
HST	**383**	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**384**	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**385**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**386**	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**387**	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**388**	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**389**	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

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HST	**391**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**405**	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**407**	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**409**	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**410**	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**411**	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**412**	Contemporary U.S., 1973- Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**414**	The Modern U.S. Economy	Origins of 19th-century slavery and industrialization; 20th-century crisis and regulation: political economy of an advanced capitalist democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**417**	Topics in Mexican American History	Focuses on specific topics in Mexican American history including immigration, civil rights, the Chicano Movement, union activism, and regional and generational differences.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**423**	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**424**	Stuart Transform of England	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**426**	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**427**	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**428**	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**429**	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**431**	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**432**	East Euro/ the Balkans-20 Cent	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**435**	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**436**	The Soviet Experiment	Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former USSR.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**438**	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**443**	The United States & Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**445**	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**446**	Colonial Mexico	Political, economic, social, and cultural developments from pre-Columbian times to 1810.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**451**	Chinese Cultural History	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**452**	Chinese Cultural History	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**453**	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**455**	The United States and Japan	Cultural, political, and economic relations in the 19th and 20th centuries. Emphasizes post-World War II period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
HST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**496**	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper. Course themes may vary by instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: For South Asia track: REL 294, or SGS 294 (topic:Intro to South Asia) with C or better; for SE Asia track: HST 240,REL240, ASB 240, GCU 240, POS 240, or SGS 240 with C or better
HST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**502**	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**512**	West Civil to the Enlightenmnt	Systematically examines various interpretations of Western civilization from the ancient Middle Eastern civilizations to the European Enlightenment.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**514**	Historians of the U.S.	Study of the history of American historical writing from the early colonial days to the 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**515**	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**525**	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**526**	Historians and Preservation	Preparation of historians for public and private historic preservation programs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be either MA or PHD student in History.
HST	**527**	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**532**	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**551**	Comparative Histories--War and Revolution	Comparative field course of the themes of war and revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**554**	Population-Ethnicity/Econ/Migr	Comparative course that explores the impact of social, cultural, or economic changes in the population.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be MA or PHD student in History.
HST	**555**	Comparative Historical Topics	Analyzes a variety of specific social, political, cultural, and intellectual topics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisite: History MA or PHD student
HST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**319**	U.S. Urban History to 1850	History of the city in American life from the colonial period to the mid-19th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**340**	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	

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HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**400**	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**401**	Topics in Comparative History	Comparative history with reference to one or more themes.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**402**	Topics in European Regional and National History	Focuses on the history of specific geographic regions or nations in Europe.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**413**	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H & C	
HST	**418**	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
HST	**419**	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**437**	Spain through the Golden Age	Cultural, economic, political, and social development of Spain from antiquity to the late 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**454**	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G & H	
HST	**464**	Women in Europe to 1750	European women's diverse religious, ethnic, national and economic roles in society, culture, and politics in the pre-modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	Pre-requisites: ENG 102 or 105 with C or better; HIS 101 or 300 with C or better
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours

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HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-15		
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**205**	Historical Themes in Africa	General introduction to selected themes in African history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**318**	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**345**	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**416**	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**444**	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**448**	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better
HST	**449**	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identify, and civil rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**450**	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed either SED 403 or SED 598 with C or better. Credit for HST 481 or HST 535 only
HST	**492**	Honors Directed Study		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**530**	Methods of Teaching Secondary History	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 480 or HST 530
HST	**535**	Teaching Secondary Social Studies	Emphasizes secondary educational methods of planning, teaching, and assessing appropriate content in the instruction of social studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 481 or HST 535
HTY	**220**	Introduction to Digital Archives	Familiarizes students with the uses and challenges of digital archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**230**	Introduction to Corporate Archives	Covers principles and techniques for creating and managing corporate archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**246**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Credit is allowed for only ENH 246 or HTY 246
HTY	**310**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
HTY	**312**	History of Science	Examines the beginnings of modern science and traces its development and impact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better

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HTY	**314**	History of Computing	Examines the history of computing, including the development of computing devices, and the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**320**	History of American Agriculture	Overview of the history of agriculture in America from pre-contact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**325**	History of American Business	The history of American business, including its evolution, structure, and values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108, or ENG 112 with a grade of C or better
HTY	**326**	History of Landscape Design	Examines the history of design traditions and landscaping from the ancient world to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with a grade of C or better
HTY	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102,ENG 105, ENG 108, or ENG 112, with a C or better
HTY	**330**	History of Printing and Media	Examines the history of printing, books, and the development of modern forms of media.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**334**	Archival Preservation and Digital Media	Covers the preservation of digital archival data.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:HTY 220, or HTY 230 with a grade of C or better
HTY	**336**	Editing Historical Documents	Covers the principles and techniques for editing historical document collections.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requsites:ENG 102, 105, 108, or ENG 112, with a grade of C or better, and HST 300 or HTY 301 with a C or better
HTY	**346**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENH 246 or HTY 246 with a C or better or currently enrolled
HTY	**360**	Women and Science	Examines the role of women in the sciences, focusing on their achievements, challenges, barriers, and persistence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**370**	History of Collecting	Historic overview of the practice of collecting art, artifacts, specimens, memorabilia. Includes classification and display systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**410**	Historic Preservation	Major topics of historic preservation, such as legislation, education. Includes principles of preservation and interpretation of artifacts and structures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better; AND HST 300 with a C or better
HTY	**450**	History of Ecology and Conservation	Examines the historical development of ecology and conservation movements in the United States and the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: HTY 301 with C or better or currently enrolled; Senior academic level
HUD	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpment student
HUD	**201**	Introduction to Housing and Urban Development	Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and non-profit practitioners.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**301**	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**302**	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**361**	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	**362**	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	**363**	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 301; HUD 361
HUD	**364**	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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HUD	**401**	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**402**	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**403**	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**461**	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	**462**	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	**463**	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	**464**	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 402; HUD 462
HUD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Housing & Urban Develpmnt BSD student
HUD	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
HUD	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
HUD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
HUM	**502**	Writing Cultures	Theories and methods of representing Western and non-Western cultures in literature, history, ethnography, and pictorial media.	N	LEC	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**503**	Research and Writing in the Humanities	Systematic training in humanistic research and writing with particular attention to the interdisciplinary study of culture.	N	SEM	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**513**	Interpretation ofCultures	Methodologies and comparative theories for the study of relationships among various aspects of culture, the history of ideas, and the arts. May be repeated for a total of 6 semester hours when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Must be a Graduate student.
HUM	**530**	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HUM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Division of Humanities T	1.		
HUM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Division of Humanities T	1-12		
HUM	**413**	Comedy: Meaning and Form		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IA	**102**	Wood Turning		Y	LEC	Y	CNV	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
IAP	**101**	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**102**	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	STO	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**103**	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**104**	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**105**	Foundations I: Fundamentals of Interdisciplinary Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary arts application.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	
IAP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**201**	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**202**	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**301**	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**302**	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**303**	Artists and the Contemporary American Experience	Explores the life of the contemporary American artist with respect to individuality, pluralism, gender, race, ethnicity, and regionalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**304**	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**305**	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**306**	Extended Traditions in Drawing	Explores alternative methods of rendering the drawn image. Emphasizes incorporating other art forms to inform students' individual work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**307**	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAP	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**321**	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**322**	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**323**	Music and the Visual Arts	Histories and theories of music and visual arts with emphasis on convergences within 20th-century avant-garde traditions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**324**	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	**325**	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Plan ASIAPBA
IAP	**331**	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**332**	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**333**	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**334**	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**335**	Vocalization and Movement	Study, application, and coordination of vocal projection techniques with bodily movement competencies in presenting original and existing contemporary performance works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**347**	Movement in Education	Theory and practice of teaching dance and creative movement in schools, K-12. Open to all students.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**351**	Concept, Image, and Text	The generation of images and metaphors using various media and visual stimuli.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**352**	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**354**	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**355**	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**356**	Spatial Impressions	Investigates 3-D forms, the processes and concepts of physicality, and the environment with readings on spatial perception and cultural objects.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**360**	IAP Laboratory	Provides instructor-student contact time focusing on the technical instruction of media and technology applications.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
IAP	**361**	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	Pre-requisites: must be in PLAN ASIAPBA, or ASACOBS
IAP	**363**	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**364**	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**365**	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in Plan:ASIAPBA OR Plan: ASACOBS
IAP	**368**	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**371**	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**373**	The Critical Artist	Focuses on artists' critical thought, theorizing, and representation of art across disciplines and genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**421**	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work. Fee.	N	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**422**	Contemporary Orchestration Practices	Traditional and experimental scoring techniques for small and large ensembles using MIDI technology, digital samplers, and traditional instruments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**431**	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**433**	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**434**	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**441**	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

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IAP	**442**	Movement and Music	Surveys ways artists have brought together movement and music in artistic creations in various disciplinary and interdisciplinary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**452**	Elements of Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**454**	New Directions in Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**457**	Urban Narrative	Conceptually based studio focusing on artists' voices in contemporary urban environment with readings on spatial perception and cultural objects. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**464**	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**465**	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**466**	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN:ASACOBS
IAP	**467**	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**468**	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN: ASACOBS
IAP	**469**	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**471**	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**472**	Theories of Arts and Performance	Key texts, thinkers, concepts, and approaches to the arts and performance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**473**	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**474**	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**480**	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-6		
IAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
IAP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**220**	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		

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IAS	**300**	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	**305**	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
IAS	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater, or be currently enrolled, or co-enrolled with IAS310.
IAS	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAS	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 406 or PHI 406
IAS	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**410**	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	**415**	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**416**	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**430**	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	**477**	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisite: ENG 101 or 105 with C or better
IAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
IAS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		

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IAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IBC	**602**	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**604**	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**608**	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**609**	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiolgical processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**660**	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	**704**	Evidence-based Behavioral Interventions I: Core Skills	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**706**	Evidence-Based Behavioral Interventions II: Advanced Skills	Cover advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Focuses on both advanced behavioral interventions theory and practice and more complex diagnostic groups and related interventions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**712**	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
IBC	**714**	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**718**	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

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IBC	**720**	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**728**	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
IBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IBS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IDN	**101**	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
IDN	**102**	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: IDN 101 with C or better
IDN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	**201**	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 102 with C or better
IDN	**202**	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 201 with C or better
IDN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
IED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**401**	Navajo Language and Culture I	History and culture are added components to the introduction of language reading, writing, and speaking. Emphasizes basic communication and appreciation of history and culture.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**403**	Navajo Language and Culture II	Emphasizes communication, grammar, and sentence structures. Translations, reading, writing, and discussions of proper and slang language. Includes cultural activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**410**	History American Indian Educ	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 410 or 510.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB & H & C	Pre-requisites: Students who have credit for IED 510, may not enroll in IED 410

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IED	**430**	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 430 or 530.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C	
IED	**433**	Counseling the Indian Student	Techniques and methods used in counseling, with emphasis on understanding Indian cultures and values. Experimentation with new counseling concepts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**444**	Govt Role-Native Ed Pol/Adm	Examines the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty as they have shaped American Indian education. Analyzes administrative practices and personnel, program and fiscal management, and resources as they reflect the historic and present influence of this triad of factors. Credit is allowed for only IED 444 or 544.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
IED	**460**	Yaqui History and Culture	Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family, traditions, community, resistance, dispersion, and survival.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C & H	
IED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
IED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
IED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**510**	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 510 or 410.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student. Students who have credit for IED 410, may not enroll in IED 510
IED	**530**	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 530 or 430.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**544**	Govt Role-Native Ed Pol/Adm	Examines American Indian education and how it is impacted by the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty. Credit is allowed for IED 544 or 444.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	**100**	Introduction to Engineering Design	Introduces industrial engineering design; teaming, the profession of engineering, computer models in engineering communication skills; quality and customer satisfaction. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	2.		Pre-requisites: Freshman or Sophomore standing
IEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**210**	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: IEE 100(or BME100,CHE100,CEE100,CSE101, ECE100,EEE101,EGR101,FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	**220**	Business/Industrial Engr	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering student; Introduction to Engineering course with C or better (or ECE 100); Minimum Sophomore standing
IEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**300**	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Prerequisites: FSE BS/BSE OR Non Engnr with a min GPA of 3.00; MAT 265, 270 or 290 with a D or greater or currently enrolled; BME 100, CEE 100, CHE 100, CSE 101, ECE 100, EEE 101, IEE 100, MAE 100 or MSE 100 with a D or greater or be currently enrolled
IEE	**305**	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: CSE 200 or 205 completed with a D or better or currently enrolled; Must either be an Engineering BS/BSE student or must be a Non-Engineering students with a minimum GPA of 3.00

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IEE	**368**	Facilities Analysis and Design	Planning, analysis, and design of the tangible physical assets of the firm. Emphasizes facilities location, materials handling, automation, computer integration, and utilization of financial resources. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: IEE 300 completed with a grade of D or better or currently enrolled; Must be either an Engineering BS/BSE student or a Non-Engineering student with a minimum GPA of 3.00.
IEE	**369**	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE students only and a grade of D or better or currently enrolled in IEE 300.
IEE	**376**	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: CSE 200 or CSE 205; MAT 242, 342, or 343
IEE	**380**	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Engineering student; MAT 266 or 271 with C or better
IEE	**382**	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Industrial Engineering BSE student; Co-requisite: IEE 380
IEE	**385**	Engr Statistics - Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE/MS/MSE/PHD student; IEE 380 with C or better or ECE 380 with D or better
IEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**405**	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering BS or BSE student
IEE	**431**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 431 or 541.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be a senior Engineering BS/BSE student.
IEE	**437**	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines. Credit is allowed for only IEE 437 or 547.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE students OR Non Engineering students with a minimum GPA of 3.0
IEE	**461**	Production Control	Techniques for the planning, control, and evaluation of production systems. Project management, forecasting, inventory control, scheduling, enterprise requirements planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering BS/BSE student AND have completed with a D or better IEE 376 or IEE 476 AND have completed ASE485, IEE 385 or IEE 485 with a grade of D or better AND have completed CSE 100 or CSE 110 with a grade of D or better.
IEE	**463**	Computer-Aided Manufacturing and Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning, and robotics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Must be an Engineering BS/BSE student with Junior or Senior standing
IEE	**470**	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Industrial Engineering BSE student; IEE 376 with C or better; IEE 380 with C or better
IEE	**474**	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: IEE 380 with C or better
IEE	**475**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	4.	CS	
IEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**490**	Project in Design and Development	Individual or team capstone project in creative design and synthesis. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE Senior; IEE 475; IEE 376 or IEE 476 with C or better
IEE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Pre-requisites: Must be an Honors student.
IEE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Pre-requisites: Must be an Honors student
IEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**505**	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**511**	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**512**	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**520**	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**530**	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**532**	Management of Technology	Topics include designing a technical strategy; technological forecasting; interfacing marketing engineering and manufacturing; designing and managing innovation systems; creativity; application of basic management principles to technology management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**533**	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**534**	Supply Chain Modeling/Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**535**	Intro Intnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**541**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 541 or 431.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student.
IEE	**543**	Cmptr-Aided Manufact/Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning and robotics. Credit is allowed for only IEE 543 or 463.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**545**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Credit is allowed for only IEE 545 or 475.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be Engineering graduate student.
IEE	**547**	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors. Credit is allowed for only IEE 547 or 437.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**552**	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better or co-enrolled in IEE 545, IEE 561, or IEE 574.
IEE	**553**	Information Systems Assurances	Develops and applies engineering approaches to assuring the security of enterprise information systems, including principles of dependable information systems, technologies for information systems, intrusion detection, system response, and recovery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate Engineering student; IEE 505 with a C or better
IEE	**560**	Object-Oriented Info Systems	Applies object-oriented technology and concepts to enterprise information systems. Topics include requirement analysis, object-oriented design and programming, rapid application development, object data management, and development of object-oriented distributed applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have a grade of C or better in IEE 505 or be currently enrolled.
IEE	**561**	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**562**	Computer-Aided Mfg-CAM Tools	Current topics in automation, distributed control, control code generation, control logic validation, CAM integration, CAD/CAM data structures, planning for control systems. Topics vary by semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student and have completed IEE 463 or IEE 543 with a grade of C or better or be currently enrolled.

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IEE	**563**	Distributed Info Systems	Introduces concepts and technologies that form the core of distributed enterprise information systems. Topics include client-server architectures, distributed objects and paradigms, Internet, World Wide Web, distributed information sharing, network programming, and e-commerce and enterprise applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS/MSE/PHD student; IEE 505 with C or better
IEE	**564**	Planning -Cmptr-Integrated Mfg	Theory and use of IDEF methodology in planning for flexible manufacturing, robotics, and real-time control. Simulation concepts applied to computer-integrated manufacturing planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**565**	Cmptr-Integrated Mfg Research	Determination and evaluation of research areas in computer-integrated manufacturing, including real-time software, manufacturing information systems, flexible and integrated manufacturing systems, robotics, and computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student AND a grade of C or better in IEE 564.
IEE	**566**	Simulation in Manufacturing	Uses simulation in computer-integrated manufacturing with an emphasis on modeling material handling systems. Programming, declarative, and intelligence-based simulation environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**567**	Simulation System Analysis	Simulation modeling of processes involving discrete and continuous system components. Topics include random number generators, output analysis, variance reduction, and statistical issues related to simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**570**	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**571**	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**572**	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**573**	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**574**	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	**575**	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**576**	Analy Semiconductor Mfg Oper	Applies operations research and statistical methods to solve problems that involve semiconductor manufacturing operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**577**	Adv Information System Oper	Industrial engineering knowledge and skills for information system operations, includidng aspects (security,quality of service, user interface, information modeling), problems, and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 505 with C or better
IEE	**578-M**	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**579**	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**581**	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in design of experiements, statistical quality control, and regression analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**582**	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		

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IEE	**585**	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**620**	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**670**	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**672**	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	**677**	Regression/Genrlzd Linear Mod	Theory of linear models including least squares, maximum likelihood, likelihood-based inference. Generalized linear models including Poisson and logistic regression, generalized estimating equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 578 with C or better
IEE	**679**	Time Series Analy/Control	Identification, estimation, diagnostic checking techniques for ARIMA models, transfer functions, multiple time series models for feedback and feedforward control schemes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 579 with C or better
IEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		

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IEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		
IEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		
IMD	**564**	Multimedia Applications in Instruction	Utilizes various forms of multimedia and authoring software to create materials and instruction. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**566**	Assessment and Evaluation of Media Applications	Examines a variety of strategies in assessing learning, collecting and evaluating data, and evaluating technology resources for classroom integration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**572**	Media Collection and Development	Explores the identification, selection, acquisition, and evaluation of a collection of library resources for a specific community of users.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**574**	Organization and Administration of School Library Media	Explores the role of the school library media specialist and program as it relates to the educational community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**576**	Social and Ethical Issues in Educational Media	Examines the social, ethical, legal, and human issues surrounding the use of technology in K-12 schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
IMD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
IMD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
IND	**120**	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student
IND	**121**	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 122
IND	**122**	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; IND 120 with C or better; Co-requisite: IND 121

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**227**	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	**228**	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	**236**	Intro Cmptr Model-Indust Dsgn	Computers in industrial design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; Passed Milestone
IND	**242**	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**243**	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**260**	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	**261**	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	**316**	20th-Century Design I	Modern European and American design from 1900 to 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**317**	20th-Century Design II	Modern European, Asian, and American design since 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**327**	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	**328**	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	**344**	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**354**	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Pre-Industrial Design or Industrial Design BSD student; PHY 111 with C or better
IND	**360**	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	**361**	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**460**	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	**461**	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**470**	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
IND	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
IND	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**544**	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
IND	**548**	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
IND	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
IND	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**111**	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
INT	**120**	Design Drawing and Media	Visual thinking: Development of freehand drawing techniques as a language and tool to explore, communicate, and process ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student
INT	**121**	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Credit is allowed for only INT 121 or 320
INT	**123**	Introduction to Computer-Aided Design of Built Environments	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		

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INT	**131**	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	SB	
INT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**221**	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 120 with C or better; Co-requisite: INT 222
INT	**222**	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Interior Design student; Co-requisite: INT 221
INT	**223**	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	**238**	Intro to CAD	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment. Lecture, lab.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**253**	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 261 with a C or better; Co-requisite: INT 351
INT	**261**	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**310**	History of Interior Design I	Design of interior spaces as an expression of cultural influences to 1835.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: ARS 102 with C or better
INT	**311**	History of Interior Design II	Design of interiors as an expression of cultural influences from 1835 to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Must have completed INT 310 with a grade of C or greater or be currently enrolled
INT	**320**	Computer Modeling for Design Studies	Computers in design management, including sofware concepts, specific packages, problem solving, illustration, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Credit is allowed for only INT 121 or 320
INT	**341**	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Corequisites: INT 352, INT 362, and INT 381
INT	**351**	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisite: INT 253
INT	**352**	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 362 and INT 381
INT	**354**	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	**362**	Interior Design Studio II: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 352 and INT 381
INT	**363**	Interior Design Studio III	Explores the poetics of materials and their assemblage in the design of public and private spaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	**364**	Interior Design Studio I	Studio problems in interior design related to behavioral response in personal and small group spaces. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		
INT	**381**	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Urban Planning , Landscape Architecture BSLA, Graphic Design BSD, Interior Architecture BSD, Architectural Studies BSD, Housing & Urban Develpmnt BSD or Industrial Design BSD

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**412**	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	Pre-requisite: INT 311 with C or better
INT	**413**	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	FLD	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: INT 412 with C or better
INT	**415**	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Minimum Junior standing
INT	**446**	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	**464**	Interior Design Studio IV: Work Environments	Studio problems in interior design-related issues in work environments. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	**465**	Interior Design Studio V: Institutional Design	Advanced interior design problem solving related to institutional facilities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	**471**	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**472**	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
INT	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
INT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**512**	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**513**	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**527**	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**529**	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

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INT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
INT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
INT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**111**	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**311**	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**312**	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**315**	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 311, 312 with a grade of D or better, or enrolled, or ITA 314 with D or better or enrolled
ITA	**319**	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ITA 202 with C or better
ITA	**321**	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**322**	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: ITA 202 with C or better
ITA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**413**	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	**420**	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**425**	Italian American Culture	Analyzes representations of Italian American history and culture in several media including literature, film, and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	

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ITA	**430**	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarch, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**441**	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**443**	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**446**	Italian Literature of the 18th and 19th Centuries	Goldoni, Parini, Alfieri, the poetry of Foscolo and Leopardi, and the sociohistorical novels of Foscolo, Manzoni, and Verga.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**449**	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
ITA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ITA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**594**	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		

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JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JHR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	**501**	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**506**	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
JHR	**510**	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**511**	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**525**	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JHR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		

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JHR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		
JHR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
JMC	**101**	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism courses. A test is offered during the first week of each semester's class so that students who feel they already have a mastery of grammar may attempt to test out.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication student
JMC	**110**	Principles and History of Journalism	Organization, function, and responsibilities of the media and adjunct services. Primary emphasis on newspapers, radio, television, and magazines. Credit is allowed for only JMC 110 or MCO 120.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student
JMC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Journalism and Broadcasting student
JMC	**201**	News Reporting and Writing	Basic news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: ENG 102, 105 or 107 and JMC 110 (or MCO 120) with C or better; JMC major; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
JMC	**301**	Intermediate Reporting and Writing (Print)	Intermediate news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**305**	Online Media	Focuses on the Internet from the perspective of the journalist--the best way to tell a story using words, photos, video, and audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 with C or better; 2.5 cumulative GPA OR Graduate Mass Communication student
JMC	**310**	Public Relations	Theory and practice of publicity, public relations, and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**313**	Introduction to Editing	Copyediting and headline writing. Electronic editing on personal computer terminals. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better
JMC	**315**	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**320**	Newscast Producing	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video. Students learn how to design, write, and supervise the television newscast. In practical lab experience, students produce a live 30-minute television newscast airing in greater Phoenix. As must be current on news of the day both locally and nationally, and be prepared to supervise other students in the news-gathering process.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites:Journalism major with a 2.50 GPA or higher; Pre-or co-requisites: JMC 315 and JMC 305 (JMC 425) with C or better if completed
JMC	**325**	Multimedia Reporting	Gives students practical experience working in an online, multimedia environment. Helps sharpen skills and gives them a real-world view of how journalism works in the 21st century.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**330**	Television Reporting	Writing, reporting and editing for television. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	**332**	Electronic Media Programming	Programming theory and evaluation, regulation, ethics, and responsibilities and basics of audience psychographics and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 200 (or MCO 200) with C or better; Minimum 2.50 GPA

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JMC	**336**	Station Operations	Basic understanding of the operations of a broadcast station. Examines internal organization structure and the relationship between each department.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 200 or MCO 200 with C or better
JMC	**345**	Videography	Develops an understanding of visual storytelling and how to craft a good, compelling story with pictures and sound. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA; JMC 201 with C or better
JMC	**351**	Photojournalism I	Basic camera, lighting, and scanning skills. Discusses ethics. Emphasizes shooting pictures for newspaper assignments on deadline. Students should have a 35mm (film) camera. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC students; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101); Minimum 2.50 GPA
JMC	**366**	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre- requisites: JMC student; JMC 110 with C or better; Minimum 2.50 GPA; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	**402**	Mass Communication Law	Legal aspects of the rights, privileges, and obligations of the press, radio, and television.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 and ENG 102 with C or better; Minimum 56 hours; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**412**	Editorial Interpretation	The press as an influence on public opinion. Role of the editorial in analyzing and interpreting current events.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Prerequisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**413**	Advanced Editing	Theory and practice of newspaper editing, layout and design, picture and story selection. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**414**	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Comm student; JMC 201 with a C or better or be currently enrolled; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); 2.50 cumulative GPA
JMC	**415**	Writing for Public Relations	Development of specific writing techniques for the practitioner in public relations agencies and divisions of major organizations. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**417**	Public Relations Campaigns	Theory, principles, and literature of public relations and how they relate to audiences, campaigns, and ethics.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**420**	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	**433**	Media Sales and Promotion	Basics of electronic media marketing practices, including commercial time sales techniques and radio/TV promotion fundamentals.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Comm student, JMC 200 (or MCO 200) with a grade of C or greater or be currently enrolled; 2.5 cumulative GPA OR Graduate Mass Communication students
JMC	**437**	Documentary Production	Emphasizes individual production projects of the student's own conception and design utilizing studio, field, and postproduction techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.5 GPA; JMC 345 with C or better OR Graduate Mass Communication student
JMC	**440**	Magazine Writing	Writing and marketing magazine articles for publication. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	**445**	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**451**	Photojournalism II	Emphasizes shooting and Photoshop skills for newspaper and magazine assignments. Film and digital photography, flash and studio lighting. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communications student; JMC 351 with a C or better or currently enrolled; 2.5 minimum cumulative GPA OR Graduate Mass Communication student
JMC	**452**	Photojournalism III	Continued practice in shooting (film and digital) and Photoshop skills for newspapers and magazines. Emphasizes single images, picture stories, editorial illustrations, and portfolio development. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 451 with C or better OR Graduate Mass Communication student
JMC	**460**	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 425 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students

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JMC	**465**	Precision Journalism	Advanced reporting methods using Internet research and data analysis tools for beat and investigative stories. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 301 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students
JMC	**470**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**472**	Media Management	Management principles and practices, including organization, procedures, policies, personnel problems, and financial aspects of station management.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; MCO 200 (or JMC 200) with C or better; Minimum 2.50 GPA OR Graduate Mass Comm student
JMC	**473**	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better
JMC	**475**	Television Newscast Production	Writing, reporting, and production of the television newscast. May be repeated once for credit. Fee.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student ; JMC 330 with C or better or currently enrolled; 2.50 cumulative GPA OR Graduate Mass Communication student
JMC	**478**	Cronkite News Service	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student; JMC 301 or JMC 330 with C or better
JMC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
JMC	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
JMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
JPN	**101**	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201,202, 309,310,311,312,313,314,321
JPN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 102 with a C or greater or in progress & may not enroll in class if received a D or better in JPN 202,309,310,311,312, 313,314,321
JPN	**202**	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 201 with a C or greater or currently enrolled
JPN	**206**	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: JPN 101 with C or better
JPN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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JPN	**301**	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: JPN 202 with C or better
JPN	**302**	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 301 with C or better
JPN	**309**	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 202 with C or better
JPN	**310**	Japanese Oral Communication II	Continued development of oral/aural sills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 309 with C or better
JPN	**311**	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 202 with C or better
JPN	**312**	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 311 with C or better
JPN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**401**	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	Pre-requisites: JPN 302 and SLC 202 with C or better
JPN	**414**	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 with a grade of C or better
JPN	**415**	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 414 with C or better
JPN	**445**	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**485**	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
JPN	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
JPN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**520**	Teaching of Japanese as a Second Language	Theory and practice of teaching Japanese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 445 or 535
JPN	**543**	Japanese Language and Linguistics	Analysis and discussion of linguistic theories applied to Japanese phonology, morphology, and syntax, including psychological, sociological, and historical aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
JPN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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JPN	**585**	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 485 or 585
JPN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
JPN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.	G	
JST	**230**	Intro to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only HST, JST or REL 230
JST	**491**	History of Anti-Semitism	Anti-Semitism means hostility, negative perceptions, and persecution of Jews. Examines the evolution of anti-Semitism in the West from antiquity to modern times. Explains the history of anti-Semitism by looking at the interplay of religious, economic, cultural, and political factors. Special attention given to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of anti-Semitism, ponders the differences and similarities between premodern anti-Judaism and modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 230 (or REL 210) with C or better
JST	**495**	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better

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JST	**496**	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JUS	**105**	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 105 or 305. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Open to undergraduate students who have not received credit for JUS 305; Justice Studies students must have 56 or less earned hours
JUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites:Must have less than or equal to 25 earned hours
JUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	**200**	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**207**	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**214**	Justice Institutions	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**222**	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	**301**	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**302**	Basic Statistical Analysis in Justice Studies	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the justice area.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	CS	Pre-requisites: Must have completed Intermediate Algebra or higher; Justice Stds student OR 2.0 GPA and 25 earned hours and specific students as determined by Justice Stds Depart. OR 2.0 GPA and more than 56 hours and not be a Justice Stds student.
JUS	**303**	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**305**	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 305 or 105. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**306**	Police and Society	Focuses on community policing; critical inquiry of administrative decision making; perspectives on police-citizen violence; street practices; urban policing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**308**	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**310**	Corrections and Justice	Examines the United States prison condition; types of offenders; issues including drugs, gangs, drunk driving, racial discrimination, and "intermediate" punishments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**311**	Crime, Prevention, and Control	Examines prevention and control of crime by a review of contemporary theories, justice agency procedures, and social policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**320**	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**321**	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA

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JUS	**323**	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**325**	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**329**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**332**	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**335**	Organized Crime	Nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**350**	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**352**	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**360**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**374**	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**375**	Justice and the Mass Media	Surveys the impact of mass media and popular culture on social justice, including criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**382**	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**385**	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 2.00 GPA; minimum 12 semester hours; If Justice Studies student, must be enrolled or earned J-1 Core Status or earned Capstone Status
JUS	**404**	Imperatives of Proof	Issues of evidence, rules of proof, establishing fact and identity in the justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**405**	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**408**	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**410**	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**415**	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**420**	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**422**	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**425**	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**430**	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**432**	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**435**	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**438**	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**440**	Administration and Justice	Diversity issues; procedural justice and service delivery; relationships between state and economic forces, including processes of regulation; state administrative apparatuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**444**	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**445**	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**450**	Alternatives to Incarceration	Investigates various alternatives to incarceration; advantages/disadvantages; major issues including net widening, cost effectiveness, risk assessment, community crime prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**452**	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social ,and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**460**	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**463**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**465**	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**467**	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**469**	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**470**	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	**474**	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**477**	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**479**	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
JUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Justice Studies MS or PHD student
JUS	**501**	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**503**	Crime and Social Causation	Theories of deviance and crime as they relate to social policies and specific response of the justice complex.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**509**	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**521**	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**542**	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**550**	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**555**	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**560**	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**570**	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**575**	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
JUS	**579**	Political Deviance	Seminar examines the politics of deviance by integrating the study of conflict with aspects of social organization, especially state formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**588**	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

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JUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**610**	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**620**	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	**630**	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	**640**	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	**650**	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**660**	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student
JUS	**669**	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		

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JUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
JUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
KE	**211**	Chemical Process Calculations		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	2.		
KE	**461**	Process Control		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
KIN	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**101**	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**110**	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		Pre-requisites: Must be a student in one of the following: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology.
KIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
KIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**205**	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**310**	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**334**	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed BIO 201 or ZOL 201 with a grade of C or greater or be currently enrolled; Must have completed BIO 202 with a grade of C or greater or be currently enrolled
KIN	**335**	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 (ZOL 201) and BIO 202, PHY 111, and KIN 101 (or KIN 200) with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with a C or better
KIN	**340**	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200), BIO 201 (ZOL 201) and BIO 202 (ZOL 202) and one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	**345**	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200) with a C or better; PGS 100 or PGS 101 with a C or better; BIO 201 (ZOL 201) with a C or better
KIN	**348**	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**352**	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C	Pre-requisites: KIN 101 (or KIN 200) with C or better; PGS 100 or PGS 101 with C or better
KIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**412**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed KIN 335 with a grade of C or better; If you received credit in KIN 512, you may not enroll in KIN 412
KIN	**413**	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 335 or KIN 335 with a grade of C or greater or be currently enrolled in KIN 335
KIN	**414**	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 335, KIN 335 or PED 335 with a grade of C or greater or be currently enrolled in KIN 335; Must have completed EPE 240, KIN 340 or PED 340 with a grade of C or greater or be currently enrolled in KIN 340

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**421**	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**423**	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**440**	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 532, may not enroll in KIN 440
KIN	**441**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 531, may not enroll in KIN 441
KIN	**442**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 442 or 536.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater in KIN 340. Credit is allowed for only KIN 442 or 536.
KIN	**443**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or better in KIN 340. Students who have credit for KIN 533, may not enroll in KIN 443
KIN	**444**	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**445**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 445 or 535.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**448**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 520, may not enroll in KIN 448
KIN	**450**	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 352 or KIN 352 with a grade of C or greater or be currently enrolled in KIN 352
KIN	**452**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 522, may not enroll in KIN 452
KIN	**460**	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		Pre-requisites: Must be an Honors student
KIN	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
KIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Academic Level may not equal Freshman
KIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Must be BS Kinesiology student; Seniors only
KIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
KIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**501**	Research Statistics	Statistical procedures; sampling techniques; exercise testing, exercise prescription, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**505**	Applied Exercise Physiology Techniques	Investigative techniques used in the applied exercise physiology lab. Emphasizes pulmonary function, body composition, and cardiorespiratory assessment.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**510**	Introduction to Biomechanics Research Methods	Applies mechanics to human movement analysis. Includes consideration of 2-D imaging techniques, force measurement, electromyography, and data processing methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**512**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512

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KIN	**520**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	**521**	Motor Development, Control, and Learning	Theory and research on motor skill acquisition, including learning/control and development (i.e., growth, children and exercise, and development learning).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**522**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	**530**	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**531**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	**532**	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	**533**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	**535**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 535 or 445.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**536**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 536 or 442.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking). Students who have credit for KIN 442, may not enroll in KIN 536
KIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**598**	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**610**	Advanced Topics in Biomechanics	3-D imaging techniques, data analysis theory, and integration of biomechanics research tools; includes original research project.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**621**	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

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KIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KOR	**101**	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and wrtiting skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
KOR	**102**	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:KOR 101 with a grade of D or better, or currently enrolled
KOR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**201**	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 102
KOR	**202**	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 201
KOR	**250**	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
KOR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**313**	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety or Korean written styles.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 202
KOR	**314**	Third-Year Korean II	Continuation of KOR 313.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 313
KOR	**347**	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
KOR	**350**	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	H	
KOR	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
KOR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
KOR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

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KOR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	**485**	International Field Studies in Landscape Architecture	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
LAP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAT	**101**	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
LAT	**102**	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: LAT 101
LAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**201**	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 102
LAT	**202**	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 201
LAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**421**	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**422**	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
LAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
LAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
LAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
LAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAW	**105**	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3.		
LAW	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1.		Pre-requisites: Freshman standing
LAW	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**515**	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**516**	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**517**	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**518**	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**519**	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**520**	Contracts	Continuation of LAW 515 focusing on contract interpretation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		

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LAW	**522**	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**523**	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**524**	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**526**	Property	Nonpossessory interests in property (easements, covenants, servitudes); nuisance; land use planning; and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**527**	Civil Procedure	Continuation of LAW 518; addressed subjects in LAW 518 in greater depth as well as personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**529**	Law and the Regulatory State	Introduces the importance, origins, and methods of interpreting statutes, regulations, and court rules.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**581**	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Reserved seat pre-requisites: MLS Students only
LAW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**596**	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Reserved seat pre-requisites: MLS Students only
LAW	**597**	Visiting Student Program		N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**601**	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**602**	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	**603**	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**604**	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**605**	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**606**	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student

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LAW	**608**	Business Associations I	Partnerships, limited partnerships, and small business corporations. Includes a brief introduction to accounting. Detailed analysis of the problems of forming a close corporation, state law duties of care and loyalty, management, dividends and redemptions, issuance of stock, internal dispute resolution, dissolution, and the general law of derivative actions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**609**	Business Associations II	Interrelationship of federal and state law and a brief introduction to corporate finance (1933 Act). Broad overview of large company regulations including reporting rules, proxy regulation, insider trading, sale of control, tender offers and takeovers, and going private.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**610**	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**611**	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Must be College of Law student
LAW	**612**	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**613**	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**614**	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**615**	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**616**	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**617**	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**618**	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**619**	Payments	Law of credit obligations and payment devices. Focuses on Articles 3, 4, and 4A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**620**	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**621**	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**622**	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**623**	Commercial Torts	Involves an analysis of actionable wrongs against a business entity or against proprietary rights held by that entity, covering the entire spectrum of private remedies for competitive wrongs.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**624**	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	**625**	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**626**	Advanced Legal Writing	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Must be Juris Doctor Candidate (LWJDJD); Students who have credit for LAW 634, may not enroll in LAW 626

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LAW	**627**	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**628**	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**629**	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**630**	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**631**	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**632**	Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**633**	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**635**	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**636**	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**637**	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	4.		Pre-requisite: College of Law student
LAW	**638**	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**639**	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**640**	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**641**	Securities Regulation II	Securities laws affecting the purchase and sale of publicly-traded securities.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**642**	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**643**	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**645**	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**646**	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**647**	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**648**	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**649**	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**650**	Health Law	Introduces health law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**651**	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**652**	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**653**	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**654**	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student

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LAW	**655**	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**656**	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**657**	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**658**	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre Requisites: Law Students Only
LAW	**659**	Intellectual Property Portfolio Management	Covers business/law dynamics in the technology sector.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**660**	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**661**	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**662**	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**663**	Prisoner Rights	Provides overview and basic understanding of the rights of prisoners within the United States penal system. Emphasizes prisoners¿ civil rights under the U.S. Constitution and 42 U.S.C. Section 1983, including claims such as access to courts, conditions of confinement, religious freedoms, excessive use of force, ineffective medical assistance. Analyzes prison culture and models for reform, state post-conviction rights of appeal, the death penalty, parole, and commutation. Includes optional tour of a maximum security prison (which is much different from the county jail tour) and guest speakers (correctional officers and former inmates).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**664**	Intellectual Property	Surveys the laws conventionally grouped as ¿intellectual property.¿ with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**665**	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**697**	Visiting Student Program		N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**701**	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**702**	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**703**	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**704**	Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**705**	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

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LAW	**706**	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**707**	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**708**	Gender, Sexuality, and the Law	Examines assumptions made in the law about gender and sexuality and the impact of those assumptions on the application of the law.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**709**	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**710**	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**712**	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**713**	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**715**	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**718**	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**719**	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**720**	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**721**	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**722**	Mexican Law	Comparative overview of Mexican law. Poses questions regarding the proper role and function of a legal system.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**723**	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**724**	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**725**	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**733**	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**734**	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**735**	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**736**	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**737**	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group¿s goals. In addition to analyzing the definition of a ¿cult,¿ the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members¿ families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**738**	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	**739**	Economics and the Law Seminar	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**745**	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**768**	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**770**	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal. May be repeated for credit for a maximum of 5 semester hours.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**771**	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**772**	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**773**	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**774**	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**775**	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**776**	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**777**	Technology Ventures Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**778**	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**781**	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**782**	Independent Study	See LAW 781.	N	IND	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**783**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**785**	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		

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LAW	**795**	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1.		
LAW	**797**	Visiting Student Program		N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	0.		
LDE	**361**	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture students only; Co-requisites: LTC 343
LDE	**362**	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	**363**	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	**461**	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	**462**	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LDE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
LDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GRD	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LDE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
LES	**305**	Legal, Ethical, and Regulatory Issues in Business	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey BA or BS student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.5 ASU cum GPA, OR be a graduate student.
LES	**306**	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-Requisites:Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	**380**	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR Non degree or Grad student.
LES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	**411**	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
LES	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
LES	**532**	Negotiation Agreements	Develops negotiation competencies to build partnerships and create lasting agreements with internal/external customers, suppliers, work teams, and external constituencies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: MBA student
LES	**579**	Legal and Ethical Issues for Business	Managerial decision making within the bounds of ethics, social responsibility, and legal and regulatory constraints. Strong international focus.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA student
LES	**581**	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**582**	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		
LES	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LES	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
LIA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		

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LIA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
LIA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**301**	International Organizational Behavior	Educates students to lead others in the intra- and interorganizational relationships in multinational firms operating in complex global environments. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management and Leadership student in the Leadership in International Management plan with either a Professional or Conditions status.
LIM	**303**	Negotiation and Conflict Resolution Strategies Across Cultures	Explores the impact of cultural differences on international negotiations and subsequent application of this knowledge to conflict resolution processes. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**401**	Advanced Topics in International Leadership	Provides an overview of the most current leadership theories and practices to develop students as leaders in crosscultural contexts. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
LIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		
LIM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		
LIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**510**	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	**511**	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**513**	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences				

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	**514**	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**515**	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**516**	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	**520**	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**521**	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**522**	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**523**	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**524**	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
LIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
LIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		
LIN	**610**	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**614**	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**615**	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**616**	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**617**	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**620**	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		
LIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		

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LIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		
LIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		
LIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		
LIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		
LIS	**510**	Computers and Technology in the School Library	Library uses of technology and computers. Fundamental concepts and issues in library media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**533**	Current Library Problems	Critical analysis of current practices and problems in school librarianship.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**540**	Classification and Cataloging	Descriptive cataloging and Dewey Decimal Classification of print and nonprint library materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**561**	Selection of Library Materials	Principles and procedures used in the selection of materials for the school library.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**565**	Literature for Hispanic Youth/Literatura para Jóvenes Hispanoparlantes	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**571**	Basic Reference Resources	Provides reference service in the school library. Content and use of basic resources.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**581**	School Library Administration	Administration of K-12 libraries and media centers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student

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LIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LNP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LNP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LNP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**310**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
LPH	**311**	Contemporary Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
LPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**411**	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LSC	**241**	Human Genetics	Introduces basic concepts of human heredity and cytogenetics, including Mendelian, molecular, and population genetics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**301**	Life Sciences: History and Method	Integrates philosophy, history, and methods of the life sciences. Includes issue of underrepresentation of minorities in science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**322**	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	**342**	Hormones and Behavior	Examines the short-term and long-term effects of hormones on the behavior of animals, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or greater.
LSC	**347**	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) and CHM 116 with C or better
LSC	**348**	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: must have completed BIO 181 (or BIO 188), BIO 182 (or BIO 187), CHM 113, and CHM 116 with a grade of C or greater and be co-enrolled in LSC 347.
LSC	**350**	Premedical Professional Seminar	An opportunity for students who anticipate a career in any area of medicine to explore the realities of the field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 or 188, BIO 182 or 188, BIO 353 or LSC 353, and BIO 340 or LSC 347 with C or better
LSC	**354**	Developmental Anatomy Lab	Experimental studies of developmental processes in animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**359**	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	**360**	The Biology of Human Experience	Introduces the evolutionary origins and characteristics of humans as they are reflected in morphology, physiology, ecology, and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or greater.

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LSC	**361**	Human Sexual Biology	Human sexuality from a biological and integrative perspective, including comparisons to other vertebrates and examination of social, behavioral, and physiological factors. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**362**	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**363**	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), BIO 340 (or LSC 347), LSC 353 and CHM 234 with C or better
LSC	**365**	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**430**	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), and CHM 116/115 with C or better
LSC	**432**	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed either BIO353, LSC353, or LSC359 with a grade of C or greater or be currently enrolled.
LSC	**434**	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; LSC 320 or BIO 320 with C or better
LSC	**447**	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**450**	Premedical Externship	Provides hands-on experience in a hospital setting for premedical students.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: LSC 350 with C or better
LSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**486**	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6		
LSC	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
LSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
LSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
LSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		

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LSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**343**	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: LDE 361
LTC	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
LTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MA	**513**	Algebraic Topology	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAE	**100**	Introduction to Mechanical and Aerospace Engineering	Introduces mechanical and aerospace engineering, design process, teaming, the profession of mechanical and aerospace engineering, computer models in engineering, communication skills, CAD tools, and programming tools. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites: Aerospace or Mechanical Engineering student
MAE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student

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MAE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**212**	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mech & Aero student; PHY 121 C or better; Pre/Co-requisite: MAT 274 or 275 C or better OR Non Mech & Aero student; PHY 121; Pre/Co-requisite: MAT 274 or 275
MAE	**213**	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: CEE 210, CEE 211 or MAE 212 with C or better; MAT 274 (or 275) with C or better
MAE	**214**	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	**240**	Thermofluids I	Introductory concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mechanical & Aerospace Engineer or Fulton BSE student with MAE 212 with C or better or Non MAE student with CEE 212 (may be co-enrolled) or MAE 212 with C or better
MAE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**313**	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 318 and MAE 360 with C or better
MAE	**318**	Sensors and Controls	Introduces measurement systems, feedback control modelling and dynamics of physical systems, computer simulations and real-time experiments. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5.		Pre-requisites: Mech or Aero BSE student; MAE 212 or CEE 211 with C or better; EEE 202 with C or better
MAE	**322**	Structural Mechanics	Three-dimensional stress analysis, failure theories, energy methods, finite elements, torsion of noncircular members, unsymmetrical bending, beam column, fatigue and fracture. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: MAE BS/BSE student; MAE 213 with C or better, MAT 343 with C or better; Pre/Co-requisite: MAE 384 (with C or better if completed)
MAE	**323**	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites; MAE BSE students; MAE 214 with C or better, MAE 322 with C or better
MAE	**340**	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 240 with a C or better; Pre/Co-requisite: MAE 384
MAE	**341**	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; MAE 212 with a C or better
MAE	**342**	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; MAE 322 with C or better; Pre/Co-requisite: MAE 318 (with C or better if completed)
MAE	**344**	Fundamentals of Aerospace Design	Design theory and design tools applied to aerospace engineering. Engineering drawings, solid modeling, RFP's, Federal Aviation Regulations and military specifications, aircraft sizing, rapid prototyping. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 214, 322, 360 and 384 with a C or better
MAE	**345**	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 213 and MAE 384 with C or better; Pre or Co-requisites: MAE 318 (with C or better if completed) and MAE 384 (with C or better if completed)
MAE	**351**	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	**360**	Aerodynamics	Airfoils and wings, ideal flow, panel methods, boundary layers, finite-difference solutions, wind-tunnel testing. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 with C or better; ENG 102, 105 or 108 with C or better; MAE 384 or CEE 384 with C or better or Co-requisite: MAE 384
MAE	**362**	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 and MAE 384 with C or better
MAE	**372**	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 with C or better
MAE	**382**	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students;MAE 240 with C or better

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MAE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	CS	Pre-requisites: Engineering BS/BSE student; MAT 274 or 275 with C or better; MAT 242 or MAT 343 (or MAT 342 for Non-MAE student) with C or better; Pre or Co-requisite: MAT 272 or MAT 267 (with C or better if completed);Credit only for MAE 384 or CEE 384
MAE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Engineering BS/BSE student
MAE	**400**	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Aerospace Engineering or Mechanical Engineering BSE Seniors; MAE 342 or MAE 362 completed with a C or better
MAE	**404**	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 or ECE 313 with C or better; CEE 384, MAE 384 or ECE 384 with C or better
MAE	**406**	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	**415**	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 with C or better; CEE 384 or MAE 384 with C or better
MAE	**417**	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**426**	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 322 with C or better
MAE	**434**	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 382 with C or better
MAE	**435**	Turbomachinery	Design and performance of turbomachines, including steam, gas and hydraulic turbines, centrifugal pumps, compressors, fans, and blowers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a C or better in MAE 340 or 360
MAE	**436**	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; Credit is allowed for only MAE 436 or 536
MAE	**442**	Mechanical Systems Design	Applies design principles and techniques to the synthesis, modeling, and optimization of mechanical, electromechanical, and hydraulic systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 342 or MAE 344 with C or better
MAE	**446**	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; MAE 382 with C or better
MAE	**447**	Robotics and Its Influence on Design	Robot applications, configurations, singular positions, and work space; modes of control; vision; programming exercises; design of parts for assembly.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**455**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better; Credit is allowed for only MSE 470 or 455
MAE	**462**	Space Vehicle Dynamics and Control	Attitude dynamics and control, launch vehicles, orbital mechanics, orbital transfer/rendezvous, space mission design, space structures, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**463**	Propulsion	Fundamentals of gas-turbine engines and design of components. Principles and design of rocket propulsion and alternative devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 362 with C or better; MAE 384 with C or better
MAE	**465**	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE plans; MAE 340 or MAE 362 with C or better; MAE 462 with C or better
MAE	**466**	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 360 with C or better; Credit is allowed for only MAE 466 or 566
MAE	**468**	Aerospace Systems Design	Group projects related to aerospace vehicle design, working from mission definition and continuing through preliminary design. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 313 with a C or better; MAE 344 with C or better; Pre-or Co-requisite: MAE 463 with C if completed

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MAE	**469**	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student
MAE	**471**	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 or ECE 384 with C or better; Credit is allowed for only MAE 471 or 561
MAE	**480**	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design. Integrated lecture/lab.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; C or better in MAE 214, MAE 345, MAE 465, and EEE 304, or be co-enrolled in EEE 304
MAE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**488**	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students AND a grade of C or better in MAE 340 AND a grade of C or better in MAE 342
MAE	**489**	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 488 with C or better
MAE	**491**	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 340 with C or better
MAE	**492**	Honors Directed Study		N	PRA	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Pre-requisites: Must be an Honors student.
MAE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Pre-requisites: Engineering students
MAE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**501**	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**502**	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**504**	Experimental Methods for Thermal and Fluid Processes	Theory and application of optical diagnostics and microsensors for characterizing thermofluid processes. Measurements include laser spectroscopy, velocimetry, particle sizing, and surface properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		
MAE	**505**	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	**506**	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 501 with C or better.
MAE	**507**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 506 with C or better
MAE	**510**	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	**512**	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisites: Graduate Engineering student; CEE 536, MAE 510 or MAE 515 with C or better or currently enrolled
MAE	**515**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 completed with a C or better or currently enrolled
MAE	**520**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**521**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	**523**	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; CEE 521 or MAE 520 with C or better
MAE	**524**	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 520 with C or better
MAE	**525**	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 with C or better
MAE	**527**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better
MAE	**536**	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	**540**	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**541**	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**544**	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**546**	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	**547**	Mechanical Design and Control of Robots	Homogeneous transformations, 3-D kinematics, geometry of motion, forward and inverse kinematics, workspace and motion trajectories, dynamics, control, and static forces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**557**	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**561**	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only MAE 471 or 561
MAE	**564**	Advanced Aerodynamics	Perturbation method. Linearized subsonic and supersonic flows. Thin wing/slender body theories. Lifting surface theory. Panel method computation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**566**	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressiblilty effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566
MAE	**571**	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**572**	Advanced High-Speed Flows	Introduces compressible flow. Sound waves and normal shock waves. Quasi-one-dimensional steady flows in variable area ducts with friction, heating, and cooling; unsteady one-dimensional flow, oblique shock waves, Prandtl-Meyer expansions, detonation waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**573**	Viscous Fluid Flow	Mechanics of fluids for flows in which the effects of viscosity are significant. Exact and approximate solutions of the Navier-Stokes system, laminar flow at low and high Reynolds number.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 completed with C or better or currently enrolled

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MAE	**574**	Fluid Transport in Micro/Nanoscale Devices	Focuses on fundamental fluid transport physics in micron and nanometer scale devices. At small length scales fluid motion and transport is governed by electromagnetic, interfacial, and stochastic phenomena that differentiate these flows from typical macroscale flows. In microscale devices these phenomena enable new and high-performance separation, concentration, control, and diagnostic processes. Core concepts are presented along with discussions of state-of-the-art micro and nanoscale total analytical devices. Requires knowledge of fluid mechanics, electrostatics, heat and mass transfer, and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Fulton School of Engineering graduate students only
MAE	**575**	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**577**	Turbulent Flow Modeling	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**578**	Environmental Fluid Dynamics	Studies fluid motions in Earth's hydrosphere and atmosphere on local and regional scales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		
MAE	**581**	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**585**	Conduction Heat Transfer	Basic equations and concepts of conduction heat transfer. Mathematical formulation and solution (analytical and numerical) of steady and unsteady, one- and multidimensional heat conduction and phase change problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**586**	Convection Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**587**	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**589**	Heat and Mass Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MAE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		

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MAE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Graduate Engineering student
MAE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		
MAE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAK	**101**	Elementary Macedonian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**102**	Elementary Macedonian	See MAK 101.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**201**	Intermediate Macedonian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**202**	Intermediate Macedonian	See MAK 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**311**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**312**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**411**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**412**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**501**	Models of Inquiry for Contemporary Issues	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**502**	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**505**	20th-Century Thought: Concepts of Change, Culture and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theoriesm and paradigms in 20th-century thought.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**510**	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for IAS 430, may not enroll in MAS 510
MAS	**511**	Technology, Environment and Humanity	Critically analyzes technology in relation to human and environmental issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**512**	History and Philosophy of the Social Sciences	Examines the development, historical context, and long-term importance of major theories of human nature from the 17th century until today.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		

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MAS	**513**	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**529**	Latinas and Latinos, Schooling, and Social Inequality	Advanced interdisciplinary understanding of the issues facing Latinas and Latinos in K-16 schooling in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		
MAS	**553**	Latin American Cities	Interdisciplinary study of Latin American world cities (e.g., Mexico City, Santiago) emphasizing integration with U.S. cities, including Los Angeles and Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
MAS	**585**	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	THE	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-5		Pre-requisites: ALEKS Math Placement Test with a score of 40% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**242**	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or 267 with C or better
MAT	**340**	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB. Credit is allowed for only MAT 343 or 342 toward a mathematics degree. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**351**	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 270 (or MAT 251 or MAT 265) with C or better
MAT	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MAT	**362**	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 274 (or MAT 275) with C or better
MAT	**370**	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series. Not open to students with a C (2.00) or higher in MAT 371. Credit is allowed for only MAT 370 or 371 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with a C or better
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**372**	Advanced Calculus II	Open, closed, compact sets in Rⁿ continuity, differentiation, partial differentiation, integration in Rⁿ. Inverse/implicit function theorems. Not open to students with credit in MAT 460.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 371 with "C" or better;Co-requisite: MAT 342 (or MAT 343) with "C" or better. Not open to students with credit in MAT 460
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**410**	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) with C or better
MAT	**415**	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or MAT 242 or MAT 343) with C or better C or better

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MAT	**416**	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or 242, or 343) with C or better
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**420**	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 205 and MAT 274 (or 275), and MAT 342 (or MAT 343) with a C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**423**	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 342 (or MAT 343) with a grade of C or better
MAT	**425**	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) with C or better. MAT 371 recommended.
MAT	**442**	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**444**	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 442 or MAT 443 with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**447**	Cryptography	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 100 (or CSE 100 or CSE 205); MAT 300 (or MAT 243) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**451**	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better.
MAT	**452**	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended.
MAT	**460**	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems. Not open to students with credit in MAT 372.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended. Students with credit for MAT 372, may not enroll in MAT 460
MAT	**461**	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or MAT 267 with a C or better
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**472**	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line. Appropriate as preparation for MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**473**	Intermediate Real Analysis II	Analysis in Rn: implicit function theorem, introduction to manifolds, Lebesque integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 472 with C or better
MAT	**475**	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincar-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or MAT 342 or MAT 343) and MAT 274 (or MAT 275) and MAT 370 (or MAT 371) with a "C" or better
MAT	**476**	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or 342 or 343) with C or better; MAT 274 (or 275 or 475) with C or better; MAT 370 (or 371) with C or better
MAT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**485**	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) with C or better
MAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
MAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	**514**	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**515**	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**516**	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**517**	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**518**	Combinatorial Optimization	Systematic development of combinatorial optimization, including linear programming, duality, primal-dual algorithms, network flow algorithms, weighted matchings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**541**	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**542**	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**543**	Abstract Algebra	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**544**	Abstract Algebra	Continuation of MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**545**	Abstract Algebra	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**547**	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**548**	Class Field Theory	Theory of the abelian extensions of global and/or local fields. Students should have previously taken a course in algebraic number theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**570**	Real Analysis	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**571**	Real Analysis	Continuation of MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**572**	Complex Analysis	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**573**	Complex Analysis	Continuation of MAT 572.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**574**	Theory of Ordinary Differential Equations	Systems, existence proofs, singularities, asymptotic behavior of solutions, boundedness of solutions, eigenvalues and eigenfunctions, and perturbation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**578**	Functional Analysis	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**579**	Functional Analysis	Continuation of MAT 578.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MAT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MAT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics. Credit is allowed for only MAT 117 or 113. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-5		
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 170 with a grade of C or greater or be currently enrolled OR have completed the Calculus Placement Exam with a score of 36 or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 271 with a grade of C or greater or be currently enrolled.
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT272 with a grade of C or greater or be currently enrolled.
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**350**	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 275 (or MAT 274) with D or better; MAT 343 (or MAt 342) with D or better; Co-requisite: STP 420
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 272 with a C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed MAT300 and MAT342 with a grade of C or greater or be currently enrolled.
MAT	**450**	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals. Credit is allowed for only MAT 106 or 113.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MBB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**245**	Principles of Molecular and Cellular Biology I	Introduces molecular biology, genetic engineering, gene expression/control and evolution, in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	Pre-requisites: CHM 113 with C or better; Pre/Co-requisite: CHM 116 (with C or better if completed)
MBB	**247**	Principles of Molecular and Cellular Biology II	Introduces cell biology, metabolism and regulation, bioenergetics, and protein translocation in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 245 (or BIO 188) with a C or better
MBB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: MBB 247 or BIO 340 with a C or better; Students who have credit for BIO 343, may not enroll in MBB 343
MBB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB or PLB 350
MBB	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit is allowed for only BIO or MBB 440
MBB	**444**	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre or Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MIC 445 may not enroll in MBB 445
MBB	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	**490**	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 247 with C or better; BIO 340 with C or better
MBB	**491**	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 343 with C or better; BIO 340 with C or better
MBB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
MBB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MBB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MBB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**501**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Credit is allowed for only ASM, BIO or MCB 506
MCB	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**555**	Advanced Molecular and Cellular Biology I	Study of structural and functional organization of biomolecules and cells, based on current literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
MCB	**556**	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MCB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MCB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**701**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MCB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MCE	**548**	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
MCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCE	**230**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
MCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**447**	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
MCE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
MCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
MCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCO	**498**	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	N	OPT	College of Public Programs	Arizona State University	1-7		
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
MCO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**200**	Introduction to Electronic Media	Surveys electronic media in the United States: history, regulation, organization, programming, and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**302**	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Communication student with a cumulative GPA of at least 2.0
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB & H	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**421**	Media Problems	Trends and problems of the mass media, emphasizing editorial decisions in the processing of information.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Minimum 2.25 GPA; Journalism & Mass Comm student OR Graduate Mass Communications student
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	G	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**435**	Emerging Media Technologies	Surveys new mass communication technologies and media distribution platforms in a convergent mass media environment.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**440**	Applied Media Research	Design, conduct, and analysis of applied media research. Students participate in the Cactus State Poll.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student

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MCO	**450**	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	HU	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**455**	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity¿s most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**460**	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	C	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**465**	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**470**	Issues Management and Media Strategy	Strategic aspects of media planning and management in public relations, public affairs, crisis communication lobbying, media ethics, and government relations.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR Graduate Mass Communication student
MCO	**473**	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Pre-requisites: Must be an Honors student
MCO	**493**	Honors Thesis		N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Pre-requisites: Must be an Honors student
MCO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
MCO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**501**	Newswriting and Reporting	Designed for graduate students in the MMC program who have undergraduate degrees in nonjournalism areas. Objective is to teach fundamentals of writing and reporting. Fee.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**503**	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**505**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**510**	Media Research Methods	Professional approach to online and library research, getting and using public records, and investigative journalism techniques.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**520**	Mass Communication Theories and Process	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to various professional communication needs.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**522**	Mass Media and Society	Mass media as social institutions, particularly interaction with government and public. Emphasizes criticism and normative statements.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student

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MCO	**525**	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**530**	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**531**	Advanced Broadcast Reporting	News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**532**	Foundations in Mass Communication Research	Designed for students who have not had a course in academic research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Masters of Mass Communcation and Journalism and Mass Communication PhD students
MCO	**540**	Historical/Legal Methods	Introduces legal and historical methods necessary to conduct qualitative mass communication research.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**560**	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**570**	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisite: Masters of Mass Communication student
MCO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		
MCO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	**710**	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism Mass Communication PHD students
MCO	**711**	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student
MCO	**712**	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student

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MCO	**720**	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**722**	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**755**	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication PhD student
MCO	**765**	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	DIS	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
MDL	**410**	Laboratory Leadership	Clinical lab leadership and management. Applies the principles of personnel management and supervision, allocation of resources, and staff communication.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Prerequisite: Admission to Medical Laboratory Science program
MET	**150**	Introduction to Engineering Technology	Introduces mechanical, manufacturing, and aeronautical engineering technology. Covers aspects of the industries utilizing these majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**160**	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**211**	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	**230**	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**231**	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 160 and MET 230
MET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**300**	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 230 and MET 231 OR MSE 250 OR Manufacturing Technology & Management concentration BAS student
MET	**302**	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: College of Technology and Innovation or Fulton Engineering students
MET	**309**	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**313**	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	**314**	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 313 or MAE 213 or MSE 211 or CON 223 or CEE 213 OR be co-enrolled in MET 313
MET	**321**	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites:AET 312; MET 313; MET 340

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MET	**331**	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or CON 223 or MAE 213)
MET	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: PHY 112 or PHY 131; MAT 266 or MAT 271
MET	**341**	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**344**	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; MET 300 (or MSE 250) or College of Technology and Innovation BAS student in Manufacturing Technology & Management concentration and MET 300
MET	**345**	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**351**	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: EST 210
MET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**396**	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or Senior standing
MET	**400**	Materials and Joining Processes	Effects of joining processes on metals and composites. Thermal cycle effects on solid-state and liquid-solid material transformations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**401**	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: APM 301; students who have credit for MET 501, may not enroll in MET 401
MET	**402**	Advanced Material Joining	In-depth analysis of common materials-joining processes and their process parameters. Includes automation, soldering, and adhesive bonding. Lecture, lab.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**409**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	**410**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 410 or 510.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341 . Students with credit for MET 510, may not enroll in MET 410
MET	**415**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341; students who have credit for MET 515, may not enroll in MET 415
MET	**416**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516
MET	**418**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 418 or 518.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300 or MSE 250. Students who have credit for MET 518, may not enroll in MET 418
MET	**421**	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 313, MET 340
MET	**423**	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 331
MET	**424**	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210; MET 321; MET 421
MET	**426**	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	**427**	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requistes: MET 423; MET 424
MET	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 or MAE 240; Credit is allowed for only EGR or MET 432
MET	**433**	Thermal Power Systems	Analyzes gas power, vapor power, and refrigeration cycles. Components of air conditioning systems. Direct energy conversion. Psychrometry. Analyzes internal combustion engines and fluid machines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: MET 432 OR College of Technology and Innovation MS student
MET	**434**	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432

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MET	**435**	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340
MET	**436**	Turbomachinery Design	Applies thermodynamics and fluid mechanics to the analysis of machinery design and power cycle performance predictions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 OR Technology and Innovation or Fulton Engineering graduate student
MET	**437**	Design for Materials Joining	Uses design principles to analyze structures and determine appropriate weld/braze/solder or adhesive joint size. Uses welding codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300
MET	**438**	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 OR Technology and Innovation or Fulton Engineering graduate student
MET	**440**	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331
MET	**442**	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; Credit is allowed for only MET 442 or 502
MET	**443**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	**444**	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 309; Credit is allowed for only MET 444 or 504
MET	**452**	Implementation of Robots in Manufacturing	Robotic workcell design, including end effectors, parts presenters, and optimum material flow.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351 OR Technology and Innovation or Fulton Engineering graduate student
MET	**455**	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351
MET	**460**	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 and senior status
MET	**461**	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 460
MET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
MET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
MET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Minimum Junior status; College of Technology and Innovation or Fulton Engineering student
MET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Minimum Junior standing; Manufacturing Engineering Tech student OR Technology and Innovation or Fulton Engineering graduate student
MET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**501**	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	**502**	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	**504**	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	**507**	Manufacturing Enterprise	Organization and project management of cellular manufacturing methods, including IIT and lean manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level or greater
MET	**509**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 409 or 509
MET	**510**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 510 or 410.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for MET 410, may not enroll in MET 510

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MET	**512**	Introduction to Robotics	Introduces industrial robots. Topics include: robot workspace, trajectory generation, robot actuators and sensors, design of end effectors, and economic justification. Application case studies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level OR Graduate or Non-degree students
MET	**513**	Advanced Automation	Analysis and design of hard and flexible automation systems. Particular attention to material-handling technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Minimum Senior Standing; College of Technology and Innovation or Fulton Engineering
MET	**514**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	**515**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	**516**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	**518**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 518 or 418.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students who have credit for MET 418, may not enroll in MET 518
MET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
MGT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-3		
MGT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**300**	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, or Business Minor student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better.
MGT	**301**	Principles of Management	Introduces the theoretical and practical foundations of organizations with a focus on individuals, groups, and organizational systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student.
MGT	**302**	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA, and 56 earned hours; Must have completed ECN 212 or 214 with a grade of C or greater.
MGT	**303**	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey School of Business Honors student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 with C or better

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MGT	**310**	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	**320**	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better; Pre- or co-requisite MGT 300.
MGT	**350**	Seminar in International Business	Broad exposure to global business; cross-cultural differences across business disciplines; European Union history and future; impact of exchange rates.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; SCM 300 with C or better, OR Non-business student with min 2.0 ASU cum GPA and 56 earned hrs and MGT 380 with C or better
MGT	**380**	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non degree or Grad student.
MGT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre- or Co-requisite: ACC 240 or ACC 241 with C grade or better.
MGT	**400**	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	**410**	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; Pre-requisites MGT 300, and MGT 320 or MGT 303, and ENG 302 with grade of C or better.
MGT	**411**	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	**412**	Managing Human Resources	Overview of domestic and global human resources management topics pertinent to managers and first-line supervisors, as well as those with interest in human resources management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Global Business/Ldrshp Mngt or Global Business/Human Resource student with conditional or professional status, must not have earned credit for HRM 410, AND completed MGT 301 with a grade of C or greater.
MGT	**420**	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	**440**	Entrepreneurship	Provides students with a framework and a skill set for identifying, evaluating, valuing, and developing entrepreneurial opportunities. Challenges students to develop and refine their individual entrepreneurial perspective. Case-based and interactive instruction.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 300 or MGT 310 or MGT 303, and FIN 300 or FIN 302 or FIN 303 completed with a grade of C or better.
MGT	**445**	Business Plan Development	Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	**450**	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey BS or BA student. Pre-requisites ENG 302 or 301, FIN 300 or FIN 302 or FIN 303, MKT 300 or MKT 302 or MKT 303, and MGT 300 or MGT 303 with C or better.
MGT	**459**	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	**460**	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey Management BS student; Pre-requisite MGT 410, and FIN 300 or FIN 302 or FIN 303, and MKT 300 or MKT 302 or MKT 303 with C or better.
MGT	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process.
MGT	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process
MGT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey Management BS student.
MGT	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: Must be an Honors student
MGT	**493**	Honors Thesis		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
MGT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-6		
MGT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**502**	Organization Theory and Behavior	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: Specific W.P. Carey students
MGT	**503**	Human Resources Management: Principles and Skills	Emphasizes strategies for managing human resources and implementing HRM programs and policies that make people more productive and satisfied.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**504**	Ethics and Corporate Social Responsibility	Reviews practical and conceptual tools to deal with the ethical implications of a variety of types of managerial decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**505**	Leadership and the Knowledge Economy	Examines organizational processes that seek synergies between the information processing capacity of IT and the creative capacity of humans.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**512**	Professional Relationship Management	Explores theories, methods, skills, and practices central to development of professional-level expertise in the management of relationships in the workplace.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan.
MGT	**513**	Leadership Skills and Principles	In-depth study of traditional and emerging ways to demonstrate leadership effectively with emphasis on leadership development and coaching activities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan
MGT	**514**	Entrepreneurial Leaders	Applies leadership concepts to entrepreneurial processes. Considers independent entrepreneurs, as well as intrapreneurs within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Applied Leadership & Management graduate plan; MGT 513 with C or better
MGT	**515**	The Neuroscience of Leadership	Provides a rigorous understanding of how the human brain supports leaders in thought, perception, decision-making, affect, action, and social processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Mgt & Leadership graduate student in Acct & Applied Leadership or Applied Leadership & Mgt. Applied Leadership & Mgt students must have completed MGT 502, 503, 504, and 505 with C or better
MGT	**522**	Human Resource Activity and the Management of Diversity	Applies general and human resource management principles to work effectively with a diverse spectrum of people.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**523**	Performance Management	Addresses effective management of people in organizations. Considers evaluating and improving performance using concepts and application.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**559**	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-3		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**561**	Advanced Integrated Project	Capstone project of the high-technology ASU MBA. Student teams develop business plans for new technology-based products.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: MBA degree student
MGT	**570**	Management Consulting	Develops understanding of how internal and external consultants add value.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		
MGT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	0-12		
MGT	**588**	Strategic Leadership	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**589**	Strategic Management	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate W.P. Carey students or Public Administration MPA student
MGT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: MBA degree student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		
MGT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**596**	Global Strategic Management Project	Experientially examines the interaction among the strategic forces within an organization with the competitive forces in the global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in Applied Leadership & Management; MGT 502, 503, 504, and 505 with C or better
MGT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management	1-12		
MGT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
MGT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		
MGT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-15		
MGT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		
MGT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management	1-15		
MHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	THE	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**538**	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**540**	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Admission to the Masters of Healthcare Innovation
MHI	**542**	Systems Thinking in a Complex Environment	Studies basic and advanced systems principles as they relate to the American healthcare system. Specific emphasis is given to system assessment, designing system interventions, and managing system dysfunction from the innovator's perspective.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHI	**544**	Innovations in Information Systems	Allows students to develop their own learning goals around the innovative use of technology to: critically appraise and evaluate the use of technology to access information; develop skills in maximizing the use of technology to advance practice, thinking, and decision making; advance the integration of human potential and available technology; and develop strategies to address the competing priorities of technology, confidentiality, safety, high reliability principles, full disclosure to the public, and risk management. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**546**	Communication for Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**548**	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**550**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**552**	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MHI	**554**	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**561**	Capstone Innovation Project I	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**562**	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**563**	Capstone Innovation Project III	Finalizes the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
MHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
MHI	**679**	Biostatistics: Principles of Statistical Inference.	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
MHL	**140**	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	Pre-requisites:Must be a Music student; must be a freshman
MHL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**201**	Mac Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	CS	
MHL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**341**	Music History	Western music from the Greeks to the present day. Need not be taken in sequence with MHL 342.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 140 with a C or better or currently enrolled; MTC 221 with a C or better or currently enrolled
MHL	**342**	Music History	See MHL 341.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or better
MHL	**344**	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	

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MHL	**352**	The Evolution of Jazz	Origin, development, and styles of jazz music and its exponents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MTC 223 with C or better
MHL	**363**	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	Pre-requisites: Music student; MHL 342 with C or better
MHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**438**	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	**439**	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	L & H	Pre-requisites:Must be a Music student; must have completed MHL341AND MHL342 AND MTC223 with a C or greater or be currently enrolled
MHL	**440**	Music Since 1900	Examines stylistic trends, major composers and their works, and cultural contexts in music since 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L or HU	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with a C or greater
MHL	**456**	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**466**	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	(L or HU) & C	
MHL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**492**	Honors Directed Study		N	THE	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MHL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MHL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**532**	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate Music student
MHL	**535**	Medieval Music	Music of Europe in the Middle Ages, Gregorian chant, religious and secular monophony and polyphony to 1400.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**536**	Music of the Renaissance	Music in Europe, with emphasis on stylistic concepts and changes, ca. 1400-1580.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Graduate Music student
MHL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MHL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**647**	Topics in American Music	Selected topics in the history of music. Composers working in the Americas with emphasis upon music since 1900.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**657**	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**664**	History of Music Instruments	Surveys the history and development of music instruments in traditional, folk, and art cultures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**668**	Introduction to Ethnomusicology	Introduces the theory and methodology of the discipline, including bibliography, fieldwork, transcription, analysis, and organology.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**670**	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**675**	History of Choral Music	Major choral works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MHL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MHL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SG	
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SG	
MIC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SG	Pre-or Co-requisites: MIC 205 or MIC 220 (with a D or better if completed)
MIC	**220**	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requsites: CHM 116 and BIO 188 (or MBB 245)
MIC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**302**	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**314**	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**360**	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**379**	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**381**	Pathogenic Microbes	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 220 and MIC 360 with a C or better
MIC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**401**	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisite: MIC 302 with C or better
MIC	**402**	Service Learning	K-12 tutoring internship; learning activities employed were originally developed as part of the Bio Reach Program. Requires weekly reflective writing. Fee.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4		Pre-requistes: Mic 220, with a grade of C or better
MIC	**421**	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: MIC 302 with a grade of C or better
MIC	**425**	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 420 with C or better
MIC	**426**	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245) and BIO 353 with C or better
MIC	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for PSY 427, may not enroll in MIC 427
MIC	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 420 or PHI 317 with a C or better. Students who have credit for PHI 428, may not enroll in MIC 428
MIC	**441**	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 340 with C or better; MIC 220 with C or better
MIC	**442**	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre/Co-requisite: MIC 441

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MIC	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MBB 445 may not enroll in MIC 445
MIC	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**470**	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MIC 302 with C or better
MIC	**475**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**485**	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**495**	Undergraduate Research	Supervised research in microbiology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**527**	Neuroimmunology	Studies the mind's influence on immunity and the immune system's influence on the mind, neuroimmunologic diseases, and the neuroimmunological circuitry involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**585**	Molecular Virology	Selected topics concerning molecular aspects of eukaryotic virus replication and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

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MIC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
MIC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3-4		
MIC	**443**	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance. Not open to students with credit in MIC 205.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: BIO 353 or LSC 353 with C or better; LSC 445 or MIC 444 with C or better or co-enrolled in MIC 444
MIC	**444**	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SG	Pre-or Co-requisites: MIC 205 or MIC 220 (with a D or better if completed)
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MIS	**101**	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**102**	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**201**	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**202**	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**205**	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		

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MIS	**301**	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**302**	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**303**	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**401**	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**402**	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**410**	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**412**	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Pre-requisites: Must be an Honors student
MIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0.		
MKT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	**300**	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ECN 211 or ECN 212 with a grade of C or better.
MKT	**301**	Fundamentals of Marketing	Examines the role and process of marketing within the society, economy, and business organization.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisite(s): School of Global Management and Leadership student with Professional OR Conditional status
MKT	**302**	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W.P. Carey Marketing BS student; ACC 241 and ECN 221 with C or better
MKT	**303**	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey School of Business Honors student; ACC 241, 242 or 271 with C or better; ECN 221 or ECN 231 with C or better; Credit is allowed for only MKT 300, 302 or 303
MKT	**352**	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	**360**	Seminar in International Business	Broad exposure to global business and cross-cultural differences. Emphasizes the European Union history and future and the impact of financial issues on marketing practices. Lecture, discussion, group work.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W. P. Carey BS or BA student OR Non-business student with min 2.5 ASU cum GPA and min 56 earned hours; SCM 300 with C or better
MKT	**365**	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with a minimum 2.5 ASU cum GPA, 2.5 and 56 earned hours; MKT 300 or MKT 302 or MKT 303 with C or better
MKT	**370**	Professional Sales Skills	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**390**	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MKT	**391**	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**393**	Essentials of Applied International Marketing	Travel to companies outside the United States to benchmark and assess cross-cultural marketing practices. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree seeking student OR be a Graduate student
MKT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisite: Non marketing student; Minimum cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**395**	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	**402**	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3-4		Pre-requisite: W.P. Carey BS or BA student or non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 352 with C or better
MKT	**410**	Sales and Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with minimum 2.5 ASU cumulative GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**413**	Marketing Research Concepts and Practice	Research techniques for collecting, analyzing, and interpreting marketing information. Includes design and completion of a client-sponsored, industry-based research project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		
MKT	**414**	Global Strategic Marketing	Examines marketing and marketing communication strategy development, and evaluation in the context of global markets and organizational objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		Pre-requisite: Global Mgt Marketing or Int'l Studies student with conditional or professional status; MKT 300, MKT 301 or GLB 301 with C or better
MKT	**415**	Promotion Management	Market positioning and integration of promotional activities and marketing communications of the firm, including advertising, personal selling, public relations, and sales promotion.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cumulative GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**420**	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**425**	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with a minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**430**	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA; MKT 302 or MKT 303 with grade of C or better
MKT	**435**	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**442**	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**452**	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**462**	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402.
MKT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey Marketing BS student; MKT 302 or MKT 303 with B or better
MKT	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Pre-requisites: Must be an Honors student
MKT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 302 or MKT 303 with C or better
MKT	**497**	Honors Colloquium		Y	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	**502**	Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
MKT	**510**	Understanding Buyer Behavior	Examines behavioral science concepts and theories from the perspective of a marketing researcher who needs knowledge of customer behavior to aid marketing managers as they develop, evaluate, and implement effective marketing strategies for new and existing products.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**513**	Marketing Research for Product Development I	Covers qualitative and interpretive methodologies designed to understand and capture the voice of customers with the aim of infusing research results into the new product development process. Covers methods such as ethnographic and observational research, visual documentation, focus groups, in-depth interviews, and artifact analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**514**	Marketing Research for Product Development II	Provides theoretical and practical knowledge regarding the market assessment and survey research methods that underlie product development in organizations. Focuses on research techniques particularly applicable to the opportunity identification and concept/project evaluation stages of the new product development process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better or currently enrolled
MKT	**515**	Marketing Research for Product Development III	Emphasizes theory and tools useful for refining product development decisions involving narrow product development issues. Covers research techniques that are well suited for fine-tuning new product/service decisions associated with imminent market launch. Covers experimental designs, customer choice modeling, and lab and field test marketing along with appropriate data collection, measurement, and data analysis techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled
MKT	**524**	Services Marketing	Strategies for marketing services emphasizing the distinctive challenges and approaches that make marketing of services different from marketing manufactured goods.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate students; Must have completed HSA 502 or MKT 502 with a grade of C or greater or be currently enrolled
MKT	**530**	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student¿s individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization¿s structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**550**	Innovative Brand Management and Marketing Communication	Focuses on innovative approaches to brand development and management throughout the product life cycle. Emphasizes marketing communications in a fundamental aspect of this process. The demand for innovative practices is especially evident in many aspects, including new media, social media, technology, open sourcing, and customer co-creation of brands. Addresses the role of customer understanding to market success. Brand management and marketing communication are dominant innovation decision areas within marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**560**	Customer Relationship Management	Covers approaches for customer relationship management (CRM) including assessing customer value, prospect/customer identification and targeting, assessment and development of customer life-time value, and customer attrition and retention. Covers CRM issues, techniques, and terminology associated with database marketing and data mining for analytical opportunity identification. Students must complete a project using CRM software in order to demonstrate their command of CRM issues, both conceptually and practically.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**563**	Marketing Strategy	Planning and control concepts and methods for developing and evaluating strategic policy from a marketing perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey Graduate student; MKT 502 with C or better
MKT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
MKT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		
MKT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		
MLS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
MLS	**501**	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**502**	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**503**	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MPH	**520**	Principles of Epidemiology	Presents concepts and methods of the science of epidemiology. Introduces concepts important for design and interpretation of epidemiological studies. Critical selection, calculation and interpretation measures of disease frequency and effect appropriate for different study designs. Also introduces important concepts, including confounding, interaction, modeling, and methodological bias. Includes hands-on exercises in evaluation of epidemiologic data and critical review of studies in the current medical and scientific literature germane to urban and mental health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
MPH	**530**	Social and Behavioral Determinants of Health	Analyzes the major social variables that influence population health (e.g., poverty, social class, gender, race, family, community, work, behavioral risks, and coping resources) as well as the major theories of health behavior. Provides the knowledge and skills needed to diagnose/understand community, individual, and organizational health behaviors and change processes, especially in cross-cultural settings. Provides a theoretical foundation for planning culturally appropriate public health interventions/programs in the context of the social and ecological models of health behavior.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Master of Public Health
MPH	**551**	Biostatistics II	Covers more advanced statistical concepts, including multiple linear regression, elementary nonparametric techniques, simple contingency table analyses, binary dependent variable models, and survival analysis. Places more emphasis on students' ability to synthesize information and draw conclusions from results. Requires a basic knowledge of SAS programming.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: MPH 550 with B- or better

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MPH	**579**	Biostatistics I	Common descriptive and inferential techniques employed in public health, including graphical and numerical descriptive statistics; elementary probability calculation; point and confidence interval estimation and hypothesis testing for population means, proportions, differences between means and differences between proportions; association and linear regression. Emphasizes interpretation and concepts. Introduces the statistical software, SAS, as a programming tool to accomplish many of these tasks.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to MPH degree program
MPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MPH	**510**	Health Policy and Management	Provides (1) an overview of the U.S. healthcare delivery system and the policies that have shaped it and (2) a foundation in organizational theory and design concepts to support improved system performance. Identifies the dynamics of an organization in terms of its power and political structures, applies creative problem-solving methods, and effectively implements change. Emphasizes the interpersonal and leadership skills required to be effective advocates for public health.	N	LEC	N	OPT	W.P. Carey School of Business	College of Nursing & Health Innovation	3.		
MSE	**100**	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	2.		Pre-requisites: Undergraduate Engineering or University College student
MSE	**111**	Challenges in Materials Engineering	Introduces current issues and concepts of materials engineering, relationship between materials properties, application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	
MSE	**211**	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	**215**	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	**250**	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: CHM 114 or CHM 113; Pre/Co-requisite: CHM 116
MSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**308**	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	Pre-requisite: MSE 208
MSE	**315**	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	CS	Pre-requisites: Engineering BS/BSE students OR Non-Engineering students with a minimum GPA of 3.00; MAT 275 (or MAT 274) with C or better; MSE 250 with C or better
MSE	**330**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.00; MSE 250 or ECE 350 completed with D or better or currently enrolled in MSE 250
MSE	**335**	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 330 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**355**	Materials Structure and Microstructure	Elements of the structure of metals and alloys, measurement of mechanical properties, and optical metallography. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better,OR Graduate Engineering student
MSE	**356**	Materials Structure and Microstructure Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 355
MSE	**358**	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 315 completed with D or better or currently enrolled; Engineering BS/BSE students
MSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**420**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with D or better OR Graduate Engineering student. Credit for MSE 420 or MSE 514 only.
MSE	**421**	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 420

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MSE	**431**	Materials Electrochemistry and Corrosion	Introduces terms, the structure of electrified interface and review of thermodynamics of chemical reactions, Faraday¿s Law, electrochemical thermodynamics; metal/ion potentials, redox potentials, hydrogen and oxygen electrode, Pourbaix diagrams, electrical double layer, electrocapillarity, Lippmann equation, electrochemical kinetics, theory of overvoltage, kinetics of corrosion, mixed potential theory, polarization curves, passivation of metals, pitting, fuel cells, electrodeposition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 330 completed with D or better
MSE	**440**	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 440 or 516.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 completed with a D or better or currently enrolled in MSE 355
MSE	**441**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 441 or 512.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with a C or better or ECE 350 with D or better
MSE	**450**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; PHY 131; MSE 355; Students who have credit for MSE 510, may not enroll in MSE 450
MSE	**451**	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. Fee.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre-requisites: Engineering BS/BSE student; Co-requisite: MSE 450
MSE	**470**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or Materials minor ; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better. Students who have credit for MAE 455, may not enroll in MSE 470
MSE	**471**	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 355 with D or better
MSE	**475**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; May not enroll in MSE 475 if received credit for MSE 518, EEE 518, or CHE 518
MSE	**476**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 476 or 519.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better. May not enroll in MSE 476, if received credit for MSE 519
MSE	**482**	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisites: Engineering BS/BSE student; MSE 420 with a D or better or currently enrolled; Pre- or Co-requisites: MSE 470 and MSE 471 (with D or better if completed) OR Graduate Engineering students
MSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**490**	Capstone Design Project	For small groups in fundamental or applied aspects of engineering materials; emphasizes experimental problems and design. Fee.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisite: Engineering BS/BSE student; MSE 482
MSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6		Pre-requisites: Honors students only
MSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6	L	Pre-requisites: Honors students only
MSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Engineering BS/BSE student
MSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-7		Pre-requisite: Engineering BS/BSE or Engineering Graduate student
MSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**510**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	**511**	Corrosion and Corrosion Control	Introduces corrosion mechanisms and methods of preventing corrosion. Topics include: electrochemistry, polarization, corrosion rates, oxidation, coatings, and cathodic protection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		

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MSE	**512**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components. Credit is allowed for only MSE 512 or 441.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**513**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**514**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	**515**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**516**	Mechanical Properties of Solids	Effects of environmental and microstructional variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 516 or 440.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**517**	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requsiites: Fulton Engineering Graduate students. If you have credit in CHE 518, EEE 518, or MSE 475 you may not enroll in MSE 518
MSE	**519**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 519 or 476.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**520**	Theory of Crystalline Solids	Anisotropic properties of crystals; tensor treatment of elastic, magnetic, electric and thermal properties, and crystallography of Martensitic transformations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**521**	Defects in Crystalline Solids	Introduces the geometry, interaction, and equilibrium between dislocations and point defects. Discusses relations between defects and properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**523**	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**524**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only CHM 541 or MSE 524
MSE	**525**	Physics of Materials	Teaches fundamental concepts of applied physics as related to the solid state. Wave-particle duality and the Schrodinger equation; chemical cohesion, bonds and energy bands in metals and insulators; optical, electronic, and magnetic properties. Requires a basic knowledge of differential equations; linear algebra; and electrical, magnetic, and optical properties of materials. A course in modern physics is highly recommended, but not required.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**526**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 511 or 481.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**527**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Students who have credit for PHY 482, PHY 512, or NAN 512, may not enroll in MSE 527
MSE	**540**	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only NAN, MSE or PHY 546
MSE	**550**	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student

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MSE	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only MSE, NAN, PHY or SEM 552
MSE	**553**	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-3		Prerequisite(s): degree- or nondegree-seeking graduate. Corequisite(s): MSE 552 (or PHY 552). Credit is allowed for only MSE 553 or PHY 553
MSE	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**555**	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**561**	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**562**	Ion Implantation	Includes defect production and annealing. Generalized treatment, including ion implantation, neutron irradiation damage, and the interaction of other incident beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**565**	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**570**	Polymer Structure and Properties	Relationships between structure and properties of synthetic polymers, including glass transition, molecular relaxations, crystalline state viscoelasticity, morphological characterization, and processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**571**	Ceramics	Includes ceramic processing, casting, molding, firing, sintering, crystal defects, and mechanical, electronic, and physical properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**573**	Magnetic Materials	Emphasizes ferromagnetic and ferrimagnetic phenomena. Domains, magnetic anisotrophy, and magnetastriction. Study of commercial magnetic materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		

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MSE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	**601**	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**602**	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**755**	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Doctoral Music students
MTC	**123**	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Must be a music student in the music composition (FAMUSTCBM) plan
MTC	**125**	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sightsinging and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**221**	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 125 with C or better
MTC	**222**	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 221 with C or better
MTC	**223**	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**315**	Modern Arranging	Techniques in arranging for the contemporary jazz, radio, television, and studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; MTC 223 with C or better
MTC	**316**	Modern Arranging	Continuation of MTC 315.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	**320**	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**321**	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**323**	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Bachelor of Music student
MTC	**327**	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**422**	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; Passed audition
MTC	**425**	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**428**	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites:Must be a Music student; must have completed MTC223 with a C or greater or be currently enrolled
MTC	**429**	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 321 with C or better
MTC	**430**	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**433**	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**436**	Electronic Studio Techniques I	Principles of analog electronic music systems and their application in the composition of electronic music. Assumes a thorough knowledge of music notation and intervals.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**437**	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**440**	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**441**	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requsites:Must be a Music student; must have completed MTC 321 AND MUP 236 with a C or greater or be currently enrolled
MTC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**495**	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0.		
MTC	**496**	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MTC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**516**	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**517**	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**518**	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**519**	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student

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MTC	**520**	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**523**	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	**525**	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**527**	History of Music Theory	Theory from Pythagoras to the 16th century. Need not be taken in sequence with MTC 528.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**528**	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**723**	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MTC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 180 with C or better
MTE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**380**	Arithmetic in the Elementary School	Historical numeration systems, overview of elementary number theory, including primes, factorization, divisibility, bases, modular systems, linear congruence, and continued fractions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE181 with C or better
MTE	**381**	Geometry in the Elementary School	Informal geometry, including concepts of length, area, volume, similarity, and congruence. Classification of figures, straightedge and compass constructions, and motion geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 380 with C or better
MTE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	C	Pre or Co-requisites: A college level math course
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better; Teacher Education milestone
MTE	**483**	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better
MTE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	**585**	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**587**	Analysis for Teachers	Subject matter in mathematics appropriate for accelerated programs in secondary schools, including analytic geometry and calculus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MTE 180 with C or better
MTE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**588**	Analysis for Teachers		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MU	**502**	Hist Musical Style		N	LEC	N	CNV	Herberger College of the Arts	School of Music	2.		
MUD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
MUD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUE	**110**	Introduction to Music Education	Overview of music education. Orientation to student characteristics, teacher roles, and foundations of philosophy and history. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student
MUE	**161**	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**211**	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	**261**	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional`ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MUE161 with C or better
MUE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**310**	Music in Early Childhood Education	Identifying and understanding musical needs of young children. Methods and materials for program development for classroom teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**311**	Music for Classroom Teacher	Development of the classroom music program in the elementary school. No previous music experience or course work required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**313**	Elementary Music Methods	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisite: Music student
MUE	**315**	General Music in Secondary Schools	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student
MUE	**317**	Educational Methods for Violin and Viola	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**318**	Educational Methods for Cello and String Bass	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**327**	Educational Methods for Trumpet and Horn	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**328**	Educational Methods for Trombone, Euphonium, and Tuba	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**335**	Educational Methods for Guitar	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**336**	Educational Methods for Percussion	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Education student
MUE	**337**	Educational Methods for Flute, Clarinet, and Saxophone	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**338**	Educational Methods for Double Reed Instruments	Teaching and playing skills for music teachers. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**381**	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L	Pre-requisite: Music Therapy student
MUE	**384**	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**385**	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**386**	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**387**	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**388**	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Music Therapy student
MUE	**436**	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy student
MUE	**441**	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**463**	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	**467**	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**475**	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music Therapy student; MUE 463 (MUE 362) with C or better
MUE	**476**	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	**480**	Choral Methods	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**481**	Instrumental Practicum/Methods	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**482**	Instrumental Practicum/Methods	See MUE 481.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**485**	String Practicum/Methods	For students preparing to administer a string program and teach strings at the elementary level.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**489**	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

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MUE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**501**	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups. Prerequisite: graduate student in Music Therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Must be a graduate student in Music Therapy
MUE	**548**	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**549**	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**550**	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**551**	Advanced Studies in Elementary School Music	For experienced teachers; organization and content of K-6 general music classes. Emphasizes teaching music reading and ear training to young children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**552**	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**560**	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**562**	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**564**	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**566**	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**567**	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Must be a graduate Music Therapy student
MUE	**568**	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**569**	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	**570**	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**571**	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**572**	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**573**	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy MM student
MUE	**574**	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**575**	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**579**	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**585**	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**586**	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**754**	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**755**	Historical Research in Music Education	Knowledge and insights related to conducting historical research in music education. Includes development of a mini-proposal for a dissertation on the history of music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**756**	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**757**	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**100**	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0.		
MUP	**111**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**117**	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**121**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**127**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisites: Music students who have passed audition
MUP	**131**	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**132**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Prerequisites: Must be a Music Therapy student; must have completed MUP131 with a C or greater or be currently enrolled
MUP	**133**	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**134**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**141**	Jazz Fundamentals	Principles, methods, and theory of jazz performance and pedagogy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**209**	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**210**	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**217**	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 117 with C or better
MUP	**231**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP132 with C or better
MUP	**232**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP231 with C or better
MUP	**233**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**234**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student

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MUP	**235**	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**236**	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**237**	Fretboard Harmony	Scales, chords, harmony, basic improvisation for the guitar. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**250**	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music students who have passed audition
MUP	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**301**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP 232 with C or better
MUP	**302**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP301 with C or better
MUP	**311**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**317**	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**319**	Recording Studio Techniques	Study of both analog and digital recording methods. Includes lab time on recording console and tape machines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**321**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**327**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Music students who have passed audition
MUP	**337**	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**339**	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**340**	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 210 with C or better
MUP	**344**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**345**	Symphony Orchestra	Over a 4-year period, the student is introduced to the masterpieces of symphony orchestra literature. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**346**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**350**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**352**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**353**	Symphonic Chorale	4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**357**	Women's Chorus	2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**361**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets daily.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**362**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 2 hours per week in fall, 4 hours in spring. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**363**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 2 hours per week. Performing ensemble. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition

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MUP	**370**	Music Theatre: Techniques	Exercises and improvisations for the singer/actor emphasizing body awareness, basic music theater performance skills, and freedom of the vocal and breath mechanisms. Section 1 (Movement for Singers); Section 2 (Expression); Section 3 (Interpretation); Section 4 (Advanced Expression); Section 5 (Advanced Interpretation). Sections 2 through 5 must be taken in sequence. Each section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**371**	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**372**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**373**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**374**	Music Theatre: Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**376**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**377**	Brass Choir	Specializing in public performance of music written for brass instruments. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**379**	Chamber Music Ensembles	Brass, guitar, keyboard, mixed, percussion, string, vocal, and woodwind ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**385**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**386**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**387**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**388**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**440**	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**451**	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**453**	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**454**	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**455**	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**481**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**482**	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Music students who have passed audition
MUP	**487**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Music students who have passed audition
MUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**495**	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**496**	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition

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MUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		Pre-requisites: Music students who have passed audition
MUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**507**	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**508**	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**509**	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**510**	Jazz Keyboard Harmony	Continuation of MUP 509.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**511**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		
MUP	**517**	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**518**	Advanced Improvisation	Continuation of MUP 517.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**521**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**527**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MUP	**540**	Advanced Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**541**	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**544**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**545**	Symphony Orchestra	Masterpieces of symphony orchestra literature. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**546**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**550**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**551**	Repertoire	Literature available for performance in all performing media. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**552**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit for a total of 8 hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**553**	Symphonic Chorale	4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**555**	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**557**	Women's Chorus	2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**561**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**562**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 4 hours per week. May be repeated for credit. Performing ensembl	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		

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MUP	**563**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 4 hours per week. May be repeated for credit. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**570**	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**571**	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**572**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**573**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**574**	Music Theatre: Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**576**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**579**	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**581**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Credit is allowed for only MUP 481 or MUP 581
MUP	**585**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**586**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**587**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**588**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**596**	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**597**	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	**671**	Choral Repertoire	Examines large choral/orchestral works to determine their musical and textual characteristics from a conductor's point of view.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**727**	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Doctoral music student with audition
MUP	**751**	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**796**	Solo Performance	May be repeated for credit.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**100**	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**340**	Survey of Music History	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & H	
MUS	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**355**	Survey of American Music	Growth and development of American music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**410**	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		

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MUS	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**340-W**	Listening to Music	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**349**	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**357**	Aesthetic Perception in Music Performance	2 hours per week. May be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		

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MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
NAN	**505**	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**506**	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311; PHY 315; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
NAN	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
NAN	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples across physics and astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
NAN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		

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NAV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NLM	**160**	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
NLM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 210, PRM 210 or TDM 210
NLM	**220**	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**300**	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 301, TDM 301 or PRM 301
NLM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
NLM	**310**	Volunteer Management	Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**320**	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: For American Humanics students only
NLM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 410, PRM 401 or TDM 401 with C or better; Credit is allowed for only NLM 402, TDM 402 or PRM 402
NLM	**403**	Pre-Internship Workshop	Introduces and prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303, NLM 410, or TDM 372 with C or better; Students who have credit for PRM 403 or TDM 403, may not enroll in NLM 403
NLM	**410**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 410 or 562.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Nonprofit Leadership and Mgmt or Recreation Management (nonprofit emphasis) major; minimum 2.50 cumulative GPA; 45 minimum hours; ENG 102, NLM 210, NLM 220 and MAT 142 or higher with C or better; Credit allowed only for NLM 562 or NLM 410
NLM	**420**	American Humanics Institute	National Management Institute for preparation of nonprofit professionals. Requires out-of-state conference.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-2		Pre-requisites: For American Humanics students only
NLM	**430**	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Senior standing; NLM 220 with C or better
NLM	**435**	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	DIS	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NLM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Senior standing; NLM 402, NLM 430, PRM 401, PRM 402, TDM 401 or TDM 402 with C or better; TDM 403, NLM 403 or PRM 403 (or REC 350 or REC 440) with C or better
NLM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
NLM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
NLM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**510**	Foundations of Nonprofit Management	Explores the history and role of the nonprofit sector in American society; contemporary issues and delivery systems. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**520**	Financial Management in Nonprofit Organizations	Reviews funding structures utilized by nonprofit organizations; financial tools used by managers; fund raising practices and tools. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**530**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**540**	Volunteer and Human Resources in Nonprofit Organizations	Managing the volunteer and paid staff human resources in nonprofit organizations; practices and theories. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**550**	Philanthropy: Theory and Practice	Provides overview of selected fundraising topics and insight into both the theory and practice of this area.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**555**	Strategic Management for Nonprofit Organizations	Evaluates vital areas of strategic management required for effective leadership of nonprofit organizations. Overview of areas of strategic management that help position nonprofit organizations and leaders to address opportunities and challenges to improve operational effectiveness.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Degree seeking graduate sutdent, or non-degree seeking graduate student
NLM	**560**	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**562**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 562 or 410.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Credit is allowed for only NLM 410 or 562
NLM	**565**	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**570**	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate within the complex management issues they face. Students determine their own skills and development needs regarding potential future employment.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must be a degree seeking graduate student or Non-degree seeking graduate student.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NLM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**584**	Internship		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**610**	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**620**	Critical Issues Facing Nonprofits	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Prerequisite: Master of Nonprofit Studies major
NTR	**100**	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 100 or 241
NTR	**142**	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nutrition (Food/Nutrtn Mngt), Nutrition (Human Nutrition), Nutrition (Dietetics), or Nutrition (Nutrition Comm) student
NTR	**150**	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NTR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**241**	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: CHM 101 or CHM 113 with D or better
NTR	**300**	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: NTR 100 or 241
NTR	**320**	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NTR 100 or 241
NTR	**340**	Applications in Human Nutrition	Applies nutrient metabolism through case studies and product evaluations; special topics in human nutrition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BIO 201; NTR 241
NTR	**341**	Introduction to Planning Therapeutic Diets	Cultural, health, and economic aspects of planning therapeutic diets. Assessments of food and diet composition. Reviews common therapeutic diets. Credit is allowed for only NTR 341 or 345. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed FON 100 or FON 241 with D or better or NTR 100 or NTR 241 with D or better or currently enrolled
NTR	**343**	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**344**	Nutrition Services Management	Organization, administration, and management of food and nutrition services in hospitals and other institutions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: FON 100, FON 241, NTR 100 or NTR 241
NTR	**345**	Development of Healthy Cuisines	Principles and applications of nutrition and medical nutrition therapy; development of healthy cuisines in health and disease states. Credit is allowed for only NTR 345 or 341.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students who have credit for NTR 341, may not enroll in NTR 345

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NTR	**346**	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in FON 241 or NTR 241 or be currently enrolled AND earned D or better or currently enrolled in BIO 202
NTR	**348**	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	**350**	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: NTR 341 with C or better or NTR 345
NTR	**351**	Nutrition and Health Communications	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NTR 100 or 241
NTR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**400**	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed NTR 440, NTR 441, or NTR 444 with D or better or be currrently enrolled AND earned D or better in NTR 341 or be currently enrolled.
NTR	**401**	Professional Practice in Food Service Management	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in NTR 343 or NTR 445 or be currently enrolled
NTR	**440**	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 202 with C or better; NTR 241 with C or better; NTR 340 with C or better; Credit is allowed for only NTR 440 or 540
NTR	**441**	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:You may not enroll in NTR 441, if you have credit for NTR 541; BIO 202 with D or better; BCH 361 with C or better; NTR 241 with D or better
NTR	**442**	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	**444**	Medical Nutrition Therapy	Principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 341 or FON 341 with C or better OR enrolled in NTR 341; BIO 202; Credit is allowed for only NTR 444 or 544
NTR	**445**	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or NTR 241 with D or better; NTR 142 and NTR 343 with D or better; Students who have credit for NTR 545, may not enroll in NTR 445
NTR	**446**	Human Nutrition Assessment Lecture/Laboratory	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned C or better in BCH 361 and earned C or better in NTR 440 or NTR 441; Students who have credit for NTR 446, may not enroll in NTR 546
NTR	**448**	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	**450**	Nutrition in the Life Cycle I	Emphasizes nutritional needs and problems during pregnancy, lactation, infancy, and childhood.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	**451**	Nutrition in the Life Cycle II	Nutritional needs and problems of adults, particularly the elderly.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**492**	Honors Directed Study		N	THE	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NTR	**493**	Honors Thesis		N	THE	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NTR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NTR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**501**	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**521**	Nutrition and Immunology	Critical review of current research on nutrient metabolism, immune function.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**523**	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**525**	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**527**	Energy Balance and Weight Management	Reviews energy regulation, eating disorders, obesity, weight control methodologies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**529**	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**535**	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441

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NTR	**537**	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**539**	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**540**	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 440 or 540
NTR	**541**	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 441 or 541
NTR	**544**	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 444 or 544
NTR	**545**	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 445 or 545
NTR	**546**	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 446 or 546
NTR	**548**	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 448 or 548
NTR	**550**	Advanced Maternal and Child Nutrition	In-depth review of metabolic characteristics and nutritional needs of the pregnant woman, lactating woman, infant, and child.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

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NTR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NTR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NUR	**310**	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing undergraduate student; Co-requisites: NUR 311, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**311**	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student; Co-requisites: NUR 310, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**314**	Health Assessment for Registered Nurses	Introductory knowledge and skills for systematic physical, psychosocial, and developmental nursing assessment over the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**315**	Methods and Critical Appraisal for Evidence-Based Practice	Scientific and clinical inquiry, research methodology, and critical appraisal in the synthesis of research findings for application in evidence-based nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NUR 310, NUR 311, NUR 394: Psychomotor Skills for Prof Nursing Practice) and NUR 330 with C or better; NUR 320 (or NUR 484: Intro to Nursing Practice I) with Y, OR RN-BSN student: NUR 391; NUR 392 with C or better
NUR	**320**	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Enrollment in upper division nursing program; Co-requisites: NUR 310, NUR 311 and NUR 394: Psychomotor Skills for Professional Nursing Practice
NUR	**323**	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Enrollment in upper division nursing program; NUR 310, 311, 394:Psychomotor Skills for Prof Nurs Pract with C or better; NUR 320 (or 484: Intro to Nurs Pract I) with grade of Y; Co-requisites: NUR 313 or 394:Nursing Concepts Adult Health
NUR	**330**	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**342**	Theory II: Health Integrity and Alterations	Concepts related to selected alterations in health integrity with focus on individuals, families, and groups. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate Nursing student, NUR 381 with C or better
NUR	**364**	Professional Development II: Nursing Research for RNs	Introduces concepts and issues in nursing research. Emphasizes quantitative and qualitative research processes, examination of nursing research literature.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student.
NUR	**391**	Registered Nurse Mobility I: Professional Development	Historical, philosophical, and theoretical bases for professional nursing practice. Enhancement of critical inquiry skills through exploration of selected issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisties: Must be in Nursing
NUR	**392**	Registered Nurse Mobility II: Health and Wellness	Concepts of health integrity and community-based practice and professional nursing roles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisties: Must be in Nursing
NUR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**413**	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**423**	Nursing Practice: Complex Care and Leadership and Management	Applies advanced psychomotor skills, leadership and management principles, and interprofessional collaboration for clients experiencing health alterations across the lifespan in multiple health settings. Fee.	N	LAB	N	P/F	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**430**	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Undergraduate nursing student.
NUR	**431**	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**440**	Theory III: Health Integrity and Alterations for RNs	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student; must have completed NUR 392 with a grade of C or greater.
NUR	**441**	Theory III: Health Integrity and Alterations	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student.
NUR	**444**	Theory IV: Health Integrity and Alterations for RNs	Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 315, NUR 391, TWC 361 with C or better
NUR	**445**	Theory V: Leadership and Management for RNs	Selected theories and concepts of organizations, management, leadership with focus on selected client populations for experienced RNs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**460**	Professional Development III: the Art of Nursing for RNs	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Must be an undergraduate nursing student.
NUR	**461**	Professional Development III: the Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**464**	Professional Development IV for RNs	Capstone professional development course for the RN student.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Must be an undergraduate nursing student.

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NUR	**481**	Nursing Practice III	Lab, clinical experiences. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	7.		Pre-requisites: NUR 313 (394:Nurs Conc for Adult Health), 314 (394:Nurs Conc for Psych/Mental Health), 315, 323 (484:NP Adult Health), 324 (484:NP Psych/Mental Health); Co-requisites: NUR 411 or NUR 498: Nurs Conc for Childbearing & Pediatric Clients
NUR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NUR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**495**	Community Health/Home Health Practice for RNs	Theoretical content related to community and home healthcare. Clinical practice with individual, family aggregates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**496**	Leadership and Management Practice for RNs	Capstone leadership and management experience for the RN student that utilizes patterns of knowing in nursing practice. fee	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Upper Division Nursing Program students
NUR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NUR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate Nursing student; NUR 551 with B or better
NUR	**503**	Adult Acute: Advanced Theory I	Focuses on theoretical, research, and advanced assessment skills required for advanced practice across the acute care continuum.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must be a MS nursing, AHN or non-degree nursing student; AND must have completed NUR 503 and 564 with a grade of B or better or be currently enrolled.
NUR	**508**	Advanced Nursing Practicum I: Adult Acute Nursing	Required practicum for preparation for advanced practice across the acute care continuum. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisites: Must co-enroll in NUR 503
NUR	**513**	Advanced Practice Nursing Role III	Third of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate Nursing student; NUR 512 with B or better
NUR	**521**	Psychiatric/Mental Health Nursing: Advanced Mental Health Assessment	Theories related to holistic health assessment for the promotion of physical/psychological health; develops skill in mental health assessments.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student
NUR	**526**	Advanced Neonatal Physical Assessment	Develops assessment skills related to neonate/infant, including history-taking, physical, developmental, behavioral, cultural, and genetics assessment to provide comprehensive advanced practice neonatal nursing care. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing MS student or Non-degree seeking Graduate student; Co-requisite: NUR 525
NUR	**527**	Neonatal and Pediatric Pharmacology in Nursing Practice	Examines and discusses the rationale, action, and therapeutic effect for using each class of medications employed in neonatal and pediatric healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**528**	Advanced Developmental and Family-Centered Nursing Care	Provides the foundation for providing advanced nursing care of children that is developmentally supportive, family centered, and culturally competent. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:Be in:NUNURDTMS or NUPCNDTMS, or NUGRNONDGR; & completed NUR 525 w/ a grade of B or greater(or enrolled) or co-enrolled, & completed NUR 526 or NUR 558 w/a grade= B or greater or be enrolled in either, or co-enrolled
NUR	**538**	Understanding & Applying Prin of Evidence-Based Care in Advanced Practice	Understanding how application of evidence-based practice principles assist advanced practice nurses and other healthcare professionals to provide best care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**539**	Generating Internal Evidence and Validating Application of Evidence through Outcomes Management	Assists advanced practice clinicians to provide best care through generating and validating application of evidence using outcomes management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**540**	Teaching Evidence-Based Practice	Focuses on strategies that have been demonstrated as effective methods for teaching evidence-based practice in academic and clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
NUR	**541**	Application of Principles of Mentorship for Change toward Evidence-Based Practice	Assists advance practice nurses and other healthcare professionals to facilitate change toward evidence-based practice through mentorship.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**543**	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on disseminating evidence to advance best practice with an emphasis on advancing EBP in health policy and the media.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**558**	Advanced Pediatric Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, and adolescents. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554,, or co-enrolled.

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NUR	**559**	Advanced Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, adolescents, and adults. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554, or be currently enrolled, or co-enrolled.
NUR	**578**	Gestalt Therapy I	Introduces theory and methodology of Gestalt therapy and its uses for mental health promotion and restoration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**579**	Gestalt Therapy II	Focuses on further development of Gestalt therapy and its application in working with various client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 578 with B or better
NUR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing student
NUR	**581**	Advanced Nursing Practicum I: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be in Nursing MS or Nursing (Comm Health Adv Prac) ; AND co-enrolled in CHP 501 and completed NUR 500 with a grade of B or greater,.
NUR	**582**	Advanced Human Physiology	Analyzes major theories and concepts of human physiology. Explores interrelationship of physiology and health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-3		Pre-requisites: MS Nursing, AHN or non-degree Nursing student; NUR 500, 552 and 554 with B or better
NUR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites:Must be in Nursing MS or Nursing (Comm Health Adv Prac); NUR 500, 551, 552 and CHP 502 with B or better; NUR 581 or 587 with B or better; Co-requisite: NUR 510
NUR	**587**	Advanced Nursing Practicum II: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing MS or Nursing (Comm Health Adv Prac); NUR 581 with B or better; Co-requisite: CHP 502
NUR	**589**	Research Utilization	Emphasizes the synthesis and application of research to an identified clinical nursing problem. Must be repeated for credit.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		
NUR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing Graduate student
NUR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**601**	Professional Role Development in Nursing and Healthcare Innovation	Explores professional identity in nursing education, health policy, and research and how one's identity can influence individual, family, and community engagement in healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student
NUR	**602**	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student; Co-requisite: NUR 605
NUR	**603**	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**604**	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and phlosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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NUR	**605**	Theories Related to Nursing and Healthcare Innovation	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**608**	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**609**	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**610**	EBP: Critical Appraisal/Synthesis-Evidence	Knowledge and skills in critical appraisal and synthesis of evidence to guide best practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**611**	Collaborative Inquiry	Seminar and immersion experience designed to foster student participation in multidisciplinary research teams to address nursing and health problems.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**612**	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**613**	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**614**	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**670**	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: MS Nursing (Nursing Education) or Graduate Certificate in Nursing Education; Pre/Co-requisite: NUR671 with B or better
NUR	**671**	Teaching in Academic and Practice Settings	Analyzes theories, issues, and research related to teaching in nursing. Focuses on the process of teaching/learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	**672**	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**673**	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
NUR	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NUR	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**685**	Geriatric Practicum I	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**687**	Geriatric Health Management Practicum II	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		
NUR	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**692**	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
OMT	**343**	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**344**	Industrial Organization	Industrial organization concepts. Topics relate to industrial relations, governmental regulations, organizational structure, labor relations, human factors, and current industrial practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**345**	Public Sector Management	Management in government and public agencies. Includes mission, planning and organizing to provide services, human resource issues, conflict resolution, coordination.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**401**	Statistics for Industry	Two-part online statistics with applications for the practitioner in industry. Includes data description, measures of central tendency and variability, probability, tests of hypotheses, regression analysis and analysis of categorical data.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:MAT 117 with a grade of D or better, or currently enrolled
OMT	**402**	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**405**	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**430**	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:School of Technology or Coll of Engr & Appl Sci Non-Degree plan or School of Technology BAS, BS, or MS Tech plan
OMT	**440**	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisites: TMC 346 or BAS, MTECH or Non degree CTI or FSE Engineering students
OMT	**445**	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-10		Prerequisites: Minimum 2.25 GPA AND Minimum Junior standing AND Technology & Innovation BAS or BS student
OMT	**451**	Industrial Distribution and Materials Management	Surveys topics in industrial distribution, including, but not limited to, materials handling, purchasing, receiving, warehousing, traffic, inventory control, and shipping.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MSTech OR must have received a C or greater in TMC346 OR received a D or greater in IST346 or MGT301 (or becirrently enrolled in TMC346 or IST346 or MGT301
OMT	**452**	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MS Tech
OMT	**453**	Safety Management	Development and management of safety programs, education and training, and relationships within an organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Must have received a D or greater in ITC343 or ITM343 or OMT343
OMT	**455**	Industrial Marketing Concepts	Customer and sales strategies for industrial organizations, including current practice and future planning.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Academic Level must be equal to or greater than a Junior AND must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346, OR be in a Schl of Tech Grad Plan
OMT	**456**	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**461**	Operations Management	Introduces supervisory principles as applied to production of goods and services.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: IMC 346 or IST 346 or MGT 301 or (TMC 346 AND APM 301) or STP 420, OR Engr & Tech & Innov: Non Degree or BAS or MS or MS Tech
OMT	**480**	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
OMT	**502**	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**503**	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**504**	Law and Ethics for Technical Professionals	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**520**	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**540**	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**548**	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**549**	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**550**	Industrial Training and Development	Training techniques and learning processes. Planning, developing, evaluating, and managing industrial and governmental programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**552**	Global Management Philosophies	Analyzes and compares significant supervision philosophies developed in various industrial nations and their potential application in the United States.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**560**	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**570**	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:You may not enroll in OMT 570, if you have credit for TMC 470
OMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
OPM	**301**	Operations Management	Introduces the management of service and manufacturing conversion processes, with emphases on quality management and computer applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a Global Management student with conditional or professional status
OPM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	**502**	Management of Operations Technology	Design, control, and improvement of operations technology. Concepts and modeling tools required for strategic decisions in manufacturing and service operations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
OPM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

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OPM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**300**	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**340**	Public Management and Policy	Develops conceptual, critical, and practical understanding of policy, the policy process, and policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**401**	Statistics	Surveys statistical concepts and techniques with application to public administration. Does not count toward program of study. Satisfies statistics prerequisite requirement for PAF 501 and 502.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**410**	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**411**	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**420**	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**460**	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**492**	Honors Directed Study		Y	LEC	Y	CNV	College of Public Programs	School of Public Affairs	1-3		
PAF	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
PAF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-3		
PAF	**501**	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	**502**	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**503**	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**504**	Public Affairs Economics	Basics of public sector economics, microeconomic and macroeconomic concepts applied to public sector decisions and policies.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**505**	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 with C or better
PAF	**506**	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 completed with C or better or currently enrolled
PAF	**507**	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**508**	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**509**	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	**520**	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		

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PAF	**522**	Public Labor Relations	Rise of public unionism, managerial policy toward unionism, conflict resolution; impact of unionism on budgets, personnel policies, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**523**	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**525**	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**529**	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**530**	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**531**	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**534**	Urban Infrastructure	Covers various types of infrastructure operated by local governments and the issues related to management of those various public assets.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**536**	Urban Policy Making	Analyzes the opportunities and costs of influencing public policy and the roles of officials and bureaucracies in decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**540**	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 505 with C or better
PAF	**541**	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**546**	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**547**	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
PAF	**548**	Women/Politics/Publc Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**549**	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**551**	Computers in Administration	Experience in use of computer technology for public administration problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**562**	Intergovernmental Relations	Evolution, growth, present status, and characteristics of the U.S. federal system of government. Federal-state relations, state-local relations, regionalism, councils of government, interstate cooperation, grants-in-aid, and revenue sharing.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**564**	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**570**	Urban Economics and Public Finance	Examines microeconomics at the intermediate level, along with topics in urban microeconomics focusing on issues of urban finance and taxation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**571**	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**572**	Urban Demography	Focuses on basics of demographic analysis, including natality, migration, and mortality. Emphasizes use of demographic analysis for urban problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**573**	Advanced Regression	Examines more advanced regression topics, such as limited dependent variable analysis, time-series analysis and forecasting techniques, and simultaneity.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 502 with C or better
PAF	**574**	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**579**	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	L	
PAF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		

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PAF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	**601**	Seminar:Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**602**	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral PAF student
PAF	**603**	Seminar: Organization and Behavior in the Public Sector	Structure, organization, conduct, and performance of public sector institutions in the administration of public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral student
PAF	**604**	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student; PAF 602
PAF	**610**	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PhD student
PAF	**620**	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student
PAF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-15		
PAF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Public Affairs	1-15		
PE	**123**	Tumbling		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Kinesiology	0.5		
PGM	**100**	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**110**	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**111**	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGM	**112**	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**113**	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**114**	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**120**	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**130**	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**150**	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**166**	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**200**	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**250**	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**300**	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**350**	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**367**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**400**	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**466**	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
PGM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**244**	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PGS	**270**	Psychology of Adjustment	Principles of mental health, adjustment, conflict, stress, and coping processes derived from clinical and experimental research. Intended for nonmajors; cannot be used for major credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**351**	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes. Open only to students without previous credit for PGS 350.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	
PGS	**365**	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 315 (or 350 or 351) with C or better; PSY 290 with C or better
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**414**	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PSY 290 with C or better
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101

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PGS	**441**	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**445**	Child Language and Drawing	Language acquisition and developmental changes in drawing, considered in the context of cognitive developmental stages. Children's representation and communication of knowledge through language and drawing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**451**	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**461**	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PSY 290 with C or better; PGS 350 or 351 with C or better
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**464**	Minority Issues in Psychology	Psychological issues relating to the diversity of human cultural experiences among ethnic minorities in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**467**	Psychology of Magical Beliefs	Psychological nature and bases of magical beliefs and their impact on health behaviors, eating practices, and interpersonal relations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 315 (or PGS 466 or PSY 434) with C or better; PSY 290 with C or better
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must be a Graduate student, either degree seeking or non degree seeking
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**250**	Psychology and Society	Addresses how social and behavioral science theory and research are used to understand behavior related to various social issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**370**	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better

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PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**473**	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101 with C or better; PGS 341 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**480**	Cross-Cultural Social Psychology	Focuses on patterns of social behavior in individualistic and collectivistic cultures. Includes multidisciplinary research using qualitative and quantitative methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: PGS 101 with C or better; PGS 350 with a C or better
PGS	**482**	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 350 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PGS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PGS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGV	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	

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PHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**300**	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L	
PHI	**301**	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**302**	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**304**	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**305**	Ethical Theory	Current theories about the nature of morality (metaethics) and about what is right and wrong (normative ethics).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**307**	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**308**	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**309**	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**310**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**312**	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**315**	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**316**	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**317**	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**319**	Philosophy of Computing	Philosophical problems surrounding the theory of computation. Turing machines, mind and AI, neural network computing, ethics, and epistemology of computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	CS	

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PHI	**320**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**325**	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
PHI	**333**	Introduction to Symbolic Logic	Symbolic techniques, emphasizing deductions and proofs in the propositional and 1st-order predicate calculi.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**335**	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**390**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
PHI	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only PHI 391 or REL 391
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**401**	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**402**	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**403**	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**413**	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**420**	Topics in Philosophy	Course descriptions on file in department. May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 314 with a C or better. Students who have credit for MIC 428, may not enroll in PHI 428
PHI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
PHI	**493**	Honors Thesis		N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
PHI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		

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PHI	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
PHI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

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PHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**360**	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Must have completed ENG 101, or 105 with a grade of C or greater, or be currently enrolled in ENG 101, or 105
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHL	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHL	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHS	**110**	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	**208**	Patterns in Nature	Project-oriented science course with computer training to develop critical thinking and technical skills for student-oriented K-12 science lessons. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in physical science and physics. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	3.	C	
PHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**505**	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**531**	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**534**	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**540**	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**542**	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**550**	Physics and Astronomy	Astronomy curricula and projects for secondary school, with emphasis on the role of physics in astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**556**	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**560**	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**564**	Light and Electron Optics	Principles and practice of electron-optical instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**570**	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**581**	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		

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PHS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHY	**105**	Basic Physics	One-semester survey of the principles of physics. Primarily for students who intend to take PHY 121, 131 but have not taken high school physics.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**150**	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 270 or MAT 290 with C or better
PHY	**151**	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 271 or MAT 266 with C or better; PHY 150 or PHY 121 and PHY 122 with C or better
PHY	**190**	Seminar: Physics as a Curriculum and a Profession	Seminar for new Physics majors. Instruction and information on curriculum, departmental functions, and professional preparation. Weekly meetings and excursions. Pass/fail grading.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**201**	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	CS	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	**241**	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 131
PHY	**252**	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY131 and PHY132) with C or better
PHY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**302**	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY201 with C or better
PHY	**310**	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	**311**	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	**314**	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	**315**	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**333**	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY132 with C or better
PHY	**334**	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 or PHY 131 and PHY 132 with C or better. Co-requisites: Phy 314 or PHY 361 or CHM 345, or EEE 434
PHY	**361**	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**412**	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 311 with C or better
PHY	**416**	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 315 with C or better
PHY	**420**	Research Paper	Scientific report writing. Culminates in a paper based on library or lab research or both. Taken in conjunction with other courses as approved.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	L	
PHY	**441**	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**452**	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better
PHY	**462**	Subatomic Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**465**	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 334 with C or better
PHY	**466**	Advanced Laboratory III	Continuation of PHY 465. fee	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisite: PHY 465 with C or better
PHY	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**481**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 481 or 511.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**482**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 482 or 512.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 481 with C or better. Students who have credit for PHY 512, or MSE 527, or NAN 512, may not enroll in PHY 482
PHY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Pre-requisites: Must be an Honors student
PHY	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**495**	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**501**	Methods of Computational and Theoretical Physics	Analytic and computational approaches to problems in classical and quantum physics. Topics may include numerical analysis, molecular dynamics, Monte Carlo simulations, density functional theory, high performance computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**502**	Methods of Theoretical Physics	Continuation of PHY 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 and PHY 315; Credit is allowed for only NAN 511, MSE 526, PHY 481 or PHY 511.
PHY	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**521**	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**523**	Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**531**	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**532**	Advanced Topics in Electrodynamics	Electromagnetism of dielectric media, magnetic media, and superconductors; introduction to magnetohydrodynamics, laser physics, and nonlinear optics; additional special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**541**	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
PHY	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	**551**	X-Ray and Electron Diffraction	Fresnel and Fraunhofer diffraction in integral formulation; diffraction of x rays and neutrons by crystal lattices; structures of solids, including crystal structure analysis; theory and techniques of electron microscopy/diffraction of crystalline/noncrystalline specimens.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		If you have credit for MSE 552, or NAN 552, or SEM 552, you may not enroll in PHY 552
PHY	**553**	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**555**	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**561**	Nuclear Physics	Properties of nuclei, conservation laws, internucleon forces, nuclear structure models, reactions and decays, quark model with applications to nuclei.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**562**	Nuclear Physics	Continuation of PHY 561.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**567**	Relativistic Quantum Mechanics and Field Theory	Relativistic quantum mechanics and introduction to the quantum field theory of scalar, spinor, and electromagnetic fields. QED through renormalization theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**568**	Particle Physics Phenomenology	Hadron physics, internal symmetry groups, weak interactions, lepton and quark phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**569**	The Standard Model and Beyond	Introduces and applies the standard model of strong and electroweak interactions. Special topics include recent developments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
PHY	**576**	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		

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PHY	**577**	Advanced Quantum Theory	Scattering in three dimensions, second quantization of bosons and fermions, quantization of electromagnetism, addition of angular momenta, electronic structure of atoms and molecules, introduction to relativistic quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**581**	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**582**	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**587**	Quantum Optics	Quantization of the electromagnetic field. Quantum theory of coherence, photon counting, photon states, lasers, density operators, and atomic Raman scattering.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**588**	Quantum Optics	Continuation of PHY 587.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: must have completed PHY 111 with a grade of C or greater, or be currently enrolled in PHY 111
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	SQ	Pre-requisites: MAT 266 or MAT 271 or MAT 291 with C or better ; PHY 121 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PLA	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Must be Pre-Landscape Architecture student
PLA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**222**	Computers in Landscape Architecture	Computer applications in landscape architecture including CAD, GIS, graphics, and visualization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	
PLA	**240**	Landscape Survey Techniques	Develops landscape survey skills including aerial photography, satellite images, geo-referencing, landscape surveys, and field data collection.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**261**	Landscape Architecture I	Landscape communication: communication techniques for urban planning and landscape architecture. Credit is allowed only for PLA 261 or PUP 261.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		
PLA	**262**	Landscape Architecture II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		
PLA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction. Studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**412**	Landscape Ecology and Planning	Reviews the evolution of landscape ecology and landscape planning and examines use and value.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**413**	Southwest Landscape Interpretation	Explores methods and implications of landscape interpretation within the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		

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PLA	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
PLA	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems. Lecture, studio.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Must be Landscape Architecture BSLA student
PLA	**462**	Landscape Arch VI	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: Must be Landscape Architecture BSLA student; Must have completed PLA 461 with a grade of C or greater or be currently enrolled
PLA	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12	G	
PLA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
PLA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
PLA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
PLA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**108**	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
PLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**200**	Biology of Plants	Analyzes the structure/function interaction for plant cells and tissues and properties that emerge in whole plants. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SQ	
PLB	**201**	Biology of Plants Laboratory	Lab/field experiments to teach techniques and protocols of the scientific process; reinforces concepts from lecture by asking questions and solving problems. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SQ	
PLB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L or SG	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**302**	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**304**	Biology of Algae and Fungi	Ecology, economics, and evolutionary diversity of the algae and fungi. Traditional and modern biotechnological uses.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**305**	Cacti and Succulents	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181, 182 (or PLB 200 and 201); CHM 116 with C or better
PLB	**306**	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**320**	Environmental Science (Nonmajor)	Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
PLB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	**400**	Lichenology	Chemistry, ecology, physiology, and taxonomy of lichens.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**401**	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in plant biology; requires weekly reflective reading and writing.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**404**	Phycology	Algae (both fresh water and marine forms), emphasizing field collection and identification of local representatives. Morphological, ecological, and economic aspects of the algae. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**407**	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**410**	Angiosperm Taxonomy	Principles underlying angiosperm phylogeny.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: PLB 310 with C or better
PLB	**411**	Trees and Shrubs of Arizona	Identification of woody plants from desert, chaparral, and forest habitats in Arizona. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**416**	Medical Botany	Explores plants affecting human health: modern- and folk-usage medicinal plants. Quality control, clinical evidence, plant chemistry, and ethnopharmacology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**420**	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**421**	Plant Ecology: Communities and Ecosystems	Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystems emphasizing the role of vegetation. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: GPH 111 or BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH 422 or PLB 422
PLB	**430**	Statistical Analyses in Environmental Science	ANOVAS, 1-way classification of factorial and partially hierarchic designs; introductory multivariate statistics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
PLB	**432**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 406 or PLB 432
PLB	**434**	Landscape Ecological Analysis and Modeling	Technical methods of landscape ecological analyses. Includes mathematical and statistical examination and modeling of landscape ecological patterns and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**440**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 464 or PLB 440

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PLB	**444**	Plant Growth and Development	Molecular basis of development, role of signal transduction pathways/gene regulation in control of organ formation, pollination, germination, and growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 353 with C or better
PLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors Student
PLB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
PLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
PLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	**502**	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
PLB	**540**	Plant Biochemistry	Structure/function relationships of molecules, emphasizing processes unique to plants: carbon fixation, synthesis of storage products, pigments, and secondary metabolites.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**550**	Plant Molecular Biology	Biochemistry and molecular biology of plant organelles, including protein targeting, plant viruses, and molecular designs for plant improvements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**552**	Plant Genetic Engineering	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**553**	Plant Genetic Engineering Laboratory	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**554**	Plant Biotechnology	Aseptic, clonal propagation of plants and in vitro culture of cells, organs, and tissues.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**558**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	L or SG	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLC	**101**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**102**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 101 with D or better or currently enrolled
PLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**201**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**202**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 201 with D
PLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	**492**	Honors Directed Study		N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
PLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
PLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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PLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
POR	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:POR 101 with a grade of C or better or currenlty enrolled
POR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**313**	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 201 with C or better
POR	**314**	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 313 with C or better
POR	**321**	Luso-Brazilian Literature	Representative masterpieces of Portuguese and Brazilian literature from the beginning to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: POR 313 with C or better
POR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**472**	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites: POR 313 with C or better
POR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
POR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
POR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
POR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.	G	
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**220**	Political Issues and Public Policy	Contemporary social problems and political issues, particularly development of public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L or SB	
POS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	
POS	**270**	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**300**	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**301**	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**305**	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**311**	Arizona Constitution and Government	Constitution and government of the State of Arizona. Credit is allowed for only POS 311 or 316 or 417. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2.		
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**315**	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**316**	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States. Credit is allowed for only POS 316 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**320**	Public Administration	Role of the administrator in the political process with an examination of the basic concepts of bureaucracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**330**	Contemporary Controversies in Domestic Politics	Explores key controversies in domestic politics including the environment, the economy, poverty, gender, race, and security.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**332**	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	

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POS	**333**	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**340**	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**341**	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**355**	Russia and Successor States	Description and analysis of political institutions and practices in Russia and successor states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**356**	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**357**	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**358**	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**359**	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Sahara Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**368**	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**369**	War, Politics, and Society	Relationships between techniques/technology of war and political/social structures in different time periods and locations. Who commands, dies, and pays?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**370**	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**401**	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	CS	Pre-requisite: POS 301
POS	**410**	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**426**	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**431**	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**435**	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**439**	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**442**	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**443**	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**445**	Asian Political Thought	Contemporary political ideas and theories in selected Asian countries, including the impact of Marxist and non-Marxist theories on revolutionary processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	

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POS	**451**	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**452**	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**453**	South America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**455**	Central America and the Caribbean	Governmental institutions, political processes, and developmental problems of the nation-states and dependent areas of Central America and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**459**	South and Southern Africa	Post-apartheid South African government and politics; South Africa and the southern African region; regional security and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**463**	Inter-American Relations	Diplomatic relations among the Latin American states. Development of U.S. foreign policy toward Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**465**	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**467**	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**468**	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**471**	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**472**	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**485**	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS	**501**	Methods of Political Science	Problems of method and knowledge in political science, strategies of political inquiry, and issues in philosophy of social science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**502**	Philosophy of Political Inquiry	Problems of knowledge and method in political science, with attention to both empirical and evaluative analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2-3		
POS	**503**	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**530**	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

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POS	**545**	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**550**	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**560**	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**563**	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**601**	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**602**	Advanced Survey Research	Presents design and conduct of political surveys, including sampling, instrument design, scaling, and statistical and graphical analysis of survey data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**603**	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**604**	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**606**	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**635**	State Politics and Public Policy	Introduces comparative state policy emphasizing policy or performance differences among the states and the reasons for these differences.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**636**	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**638**	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**651**	Politics of Change and Development	Examines contending approaches to national, social, and political change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**660**	The Modern World System	Theoretically driven, historical analysis of the organization and operation of the international political economy since the 16th century.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**661**	The State	Examines theories of state, state-society relations, and interstate politics emphasizing questions of sovereignty, territoriality, violence, representation, democracy, and change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**662**	International Organization	History, practical political significance, and future of international institutions, transnational regimes, and other approaches to international organization.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**664**	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**665**	foreign Policy Theory	Examines foreign policy theory and methods. Development and critique of research designs analyzing foreign policy processes within and among nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	
POS	**247**	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & G	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**342**	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU or SB	
POS	**343**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**354**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**362**	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems. Credit is allowed for only POS 362 or 160.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Credit is allowed for only POL 360, POS 160 or POL 160.
POS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**430**	Race and Politics in the Americas	Studies racial politics in North, Central, and South America with a focus on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**436**	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**437**	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**438**	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**440**	Political Futures through Science Fiction	Examines the relationship between politics and science fiction literature and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or HU	
POS	**444**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**446**	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**456**	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**460**	Politics of Globalization	Theories and analysis of the politics of economic and technological globalization in the contemporary world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**464**	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**470**	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
POS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**550**	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 550 or 350. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**555**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 555 or 355. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**560**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 560 or 360.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**565**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards. Credit is allowed for only PPE 565 or 365.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**570**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 570 or 370.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**575**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 575 or 375.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**576**	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**585**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields, with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**593**	Applied Project		Y	LEC	Y	CNV	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PPE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**210**	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**215**	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**220**	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**225**	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**350**	Physical Education for the Elementary School	Scope and values of physical in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 350 or 550. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Students who have credit for PPE 550, may not enroll in PPE 350
PPE	**355**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 355 or 555. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**360**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 360 or 560.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**365**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**370**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 370 or 570.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**375**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 375 or 575.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**474**	Field Experience in Physical Education	Analyzes course content in an elementary/secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		
PPE	**480**	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
PPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

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PPE	**495**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PRM	**120**	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**150**	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
PRM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**210**	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD, NLM, PRM or TDM 301
PRM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre- or Co-requisite: PRM 120 or REC 120 with a C or better if completed
PRM	**303**	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: NLM 160 or PRM 120 with C or better; MAT 142 with C or better ; ENG 102, 105, or 108 with C or better; Minimum 2.5 GPA
PRM	**304**	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Parks & Rec Mgmt, Rec & Tourism or Nonprofit Leadership & Mgmt student; Minimum 2.50 cumulative GPA; Minimum 45 hours; MAT 142 or better; PRM 210 (or NLM 210, TDM 210) with C or better
PRM	**311**	Leadership in Recreation and Tourism	Leadership theory and strategies applied to recreation and tourism settings, emphasizing group dynamics, motivational processes, and supervisory skills.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have a GPA of 2.0 or greater
PRM	**315**	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM120 (REC120) with C or better
PRM	**320**	Talent and Entertainment Concepts	Provides theory and skill development focused on management, marketing, finances, facilities, equipment, and operations related to coordinating entertainment elements.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 486 (or RTM 486) with C or better
PRM	**321**	Event Protocol, Ethics, and Etiquette	Theoretical and practical focus on the special elements of protocol, ethics, and etiquette as they apply to special events management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**322**	Special Event Programming	Provides a theoretical and practical base related to planning, organization, and coordination of activity elements that comprise the special events program.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**323**	Special Event On-Site Operations	Theory and practical skills focused on security, parking, traffic, waste management, transportation, communication, storage, and other operational issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**324**	Festival Site Design	Provides both a theoretical basis and practical skills focused on how to physically design and lay out a special event.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**325**	Working with Subcontractors and Vendors	Theory and skills focused on equipment rentals, food and beverage vendors, arts and crafts vendors, commercial vendors, and other subcontracted entities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**326**	Sponsorship	Provides theory and practical skills focused on selling, partnership, benefit/assets, and leverage concepts of sponsorship for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better

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PRM	**327**	Creative Event Revenue Production	Provides both theoretical and practical skills focused on earned income and other alternative financing for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**328**	Budgeting and Accounting for Special Events	Focuses on details related to budgeting, accounting, and financial controls used in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**340**	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	FLD	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**355**	Team-Building Strategies	Explores the concepts and strategies for facilitating team building, self-confidence, and positive self-esteem in situations across the lifespan.	N	LEL	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**364**	Foundations of Therapeutic Recreation	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**368**	Sports Management	Introduces concepts of sports management in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**370**	Natural Resource Recreation Planning and Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed 45 or more earned hours
PRM	**380**	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB & H	
PRM	**388**	Business Practices for Special Event Management	Emphasizes personnel, strategic planning, marketing, risk management, legal issues, and professionalism in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed PRM 486 (or RTM486) with a grade of C or better
PRM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**400**	Processes and Techniques in Therapeutic Recreation	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have completed PRM364 or REC364 with a grade of C or greater or be currently enrolled
PRM	**401**	Tourism Management	Principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 210 or PRM 210 with C or better; TDM 301 or PRM 301 with C or better; PRM 303 or TDM 372 with C or better. Students who have credit for TDM 401, may not enroll in PRM 401
PRM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better; Credit is allowed for only NLM 402, PRM 402 or TDM 402
PRM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 303 or TDM 372 with C or better; Students who have credit for TDM 403 or NLM 403 may not enroll in PRM 403
PRM	**406**	Program Design and Evaluation in Therapeutic Recreation	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: PRM 364 (or REC 364) and PRM 400 (or REC 400) with C or better if completed
PRM	**424**	Recreation Program Management	Provides nonmajors with an in-depth look at recreation program management in a variety of settings with diverse groups.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 160 or PRM 120 (REC 120) with C or better or currently enrolled; Not open to Parks & Recreation Management, Recreation (Management concentration) or Nonprofit Leadership & Management majors.
PRM	**450**	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**453**	Volunteer Management in Human Service Organizations	Administration of volunteer service programs. Study and analysis of volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**454**	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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PRM	**460**	Assessment and Documentation in Therapeutic Recreation	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 364 (REC 364) and PRM 400 (REC 400) with C or better or currently enrolled
PRM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Parks and Recreation or Recreation (Management concentration) student; PRM 402 (REC 482) and PRM 403 (REC 499 Pre Internship Workshop) with C or better
PRM	**470**	Environmental Interpretation and Education	Introduces park interpretation and environmental education that includes theories, principles, and techniques.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 380 with C or better
PRM	**475**	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or REC 120 with C or better
PRM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	**486**	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
PRM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
PRM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
PRM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned C or better in PSY 290 or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**360**	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better

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PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisite- Mus have earned C or better in PSY 290 or currently enrolled
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**438**	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**439**	Training and Skill Acquisition	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**440**	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**448**	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**449**	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**477**	Applied Psychology Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-6		
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**560**	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**561**	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**562**	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**563**	Advanced Industrial and Organizational Psychology	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Tech & Innovation	Faculty of Applied Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman; 25 or less total earned hours
PSY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**231**	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	CS	Pre-requisites: Barrett Honors student; MAT 119, MAT 170, MAT 242, MAT 251 or higher with C or better; PGS 101 with C or better
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**420**	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 and 320 with C or better
PSY	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed KIN 345 with a grade of C or greater or be currently enrolled
PSY	**424**	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 325 with C or better
PSY	**426**	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must have completed PSY 325 with a grade of C or greater or be currently enrolled
PSY	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for MIC 427, may not enroll in PSY 427
PSY	**434**	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 323 or PSY 324 with C or better
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 325 AND one of the following: BIO BIO 181 (or 188), 182 (or 187), 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with C or better
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		

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PSY	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**501**	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**506**	Survey of Research in Environmental Psychology	Major topics and paradigms in the study of person-environment relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**512**	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**524**	Advanced Physiological Psychology	Contributions of physiological processes and brain function to fundamental behavioral processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**532**	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**533**	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**534**	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**535**	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**536**	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**537**	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**538**	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**541**	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**542**	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**551**	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**553**	Social Influence	Researches literature relevant to attitude formation and change, conformity, obedience, power, compliance, and altruism and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**555**	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**569**	Advanced Study of Personality	Personality as a theoretical concept in psychology, including definitional problems, behavioral and traditional approaches, the measurement of personality, and current research issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**572**	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

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PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**574**	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**576**	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**578**	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**582**	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**624**	Clinical Neuroscience	Examines the biological underpinnings of psychological disorders at the molecular, cellular, and system levels (e.g., schizophrenia, depression, anxiety).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		

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PSY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		
PSY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**515**	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Psychology MS student
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 210, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101, PSY 230 and PSY 290 with a C or better or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**369**	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY (PGS) 101 with C or better; completed one semester of Biology
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: PSY 325 with C or better

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PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 325 AND one of the following: BIO BIO 181 (or 188), 182 (or 187), 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with C or better
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PSY	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: PGS 399 with C or better
PUB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	**501**	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PUB	**502**	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**503**	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**510**	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	DIS	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**580**	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**592**	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**190**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
PUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		

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PUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**200**	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**261**	Urban Planning I	Planning communication: communication techniques for urban planning and landscape architecture communication. Credit is allowed only for PUP 261 or PLA 261.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**262**	Urban Planning II	Reading the landscape: observing, experiencing, and graphically expressing the symbolic and aesthetic significance of natural landscapes.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**301**	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
PUP	**361**	Introductory Urban Planning Studio	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills. Fee.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**362**	Urban Planning III	Neighborhood planning: local community plan making; urban development and neighborhood improvement. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Urban Planning undergraduate student; PUP 361 with C or better
PUP	**363**	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Design Studies, Urban Planning or Housing & Urban Develpmnt undergraduate student
PUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**410**	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**412**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for APH 414 or PUP 412 only
PUP	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU	Pre-requisite: PUP 301 with C or better
PUP	**424**	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**425**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Urban Planning BA, Landscape Architecture BSLA, Architectural Studies BSD or Housing & Urban Develpmnt BSD; Students who have credit for PUP 525 may not enroll in PUP 425
PUP	**430**	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**432**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**433**	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Senior student; PUP 301with C or better
PUP	**434**	Urban Land Economics	Interaction between space and economic behavior. Examines the use and value of land through economic theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Urban Planning undergraduate student
PUP	**436**	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**441**	Economic Concepts and Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite:PUP 301 with a grade of C or better

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PUP	**442**	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**444**	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students. Credit is allowed for only PUP 527 or PUP 444
PUP	**445**	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**452**	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisite: PUP 301 with C or better
PUP	**461**	Urban Planning IV	Comprehensive planning: collection and analysis of economic, social, and environmental data relevant to urban planning; development of land-use plans. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Uban Planning undergraduate student; PUP 362 with C or better
PUP	**462**	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with C or better. 45 hours earned.
PUP	**475**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; development of skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: PUP 301 with C or better. Students who have credit for PUP 585, may not enroll in PUP 485
PUP	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 credit hours; Credit is allowed for only ASB 490 or PUP 490
PUP	**492**	Honors Directed Study		N	IND	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
PUP	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
PUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**501**	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**510**	Citizen Participation	Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**515**	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**516**	International City Design	Comparative exploration of the physical design and structure of international cities and the social, economic, and cultural forces shaping them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**520**	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**524**	Planning Methods I	Methods for urban planning research. Emphasizes research design, demographic analysis, forecasting, and survey research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**525**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	**526**	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**527**	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student. Credit is allowed for only PUP 444 or 527
PUP	**531**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**532**	Advanced Urban Planning Law	Advanced study on selected issues in planning law, such as urban design controls, exclusionary practices, compensable regulation, and tax policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**541**	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**542**	Environmental Administration and Planning	Environmental administration of policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**544**	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**546**	Urban Design Policy	Advanced study of local, state, and federal urban design policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**548**	Planning for Urban Environmental Sustainability	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**550**	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**551**	Sustainable Transportation Planning	Discusses the sustainability aspects of transportation planning. Emphasizes nonmotorized transportation, facilities, and public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisities: Graduate student; Credit is allowed for only GCU 516, SOS 560 or PUP 560
PUP	**561**	Urban Design Studio	Current urban form and urban landscape design problems within the Phoenix-centered region.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**562**	Advanced Theory of Urban Design	Study of urban design practice and underlying social, political, and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**563**	The Politics of Urban Space and Design	Advanced seminar critically examines major intellectual traditions investigating urban form, the production of urban space, and socio-spatial practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**565**	Smart Growth and New Urbanism	History, theory, principles, and practices of smart growth and new urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	**572**	Planning Studio I: Data Inventory and Analysis	Comprehensive planning workshop dealing with real community problems. Focuses on the data gathering and analysis steps of the planning process. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**574**	Planning Studio II: Options and Implementation	Comprehensive planning workshop dealing with real community problems. Focuses on the development of options, plan making, and plan implementation. fee	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**575**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**576**	GIS Studio	GIS as a tool to address large, multifaceted planning problems.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate Liberal Arts student
PUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmntl Planning MUEP student
PUP	**585**	International Field Studies in Planning		N	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Must be graduate student. Students who have credit for PUP 485, may not enroll in PUP 585
PUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**622**	Planning Methods II: Quantitative Planning Analysis	Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 524 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	**642**	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**644**	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
QBA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**221**	Statistical Analysis	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must have completed one of the following courses with a grade of D or greater or be currently enrolled: MAT 119, MAT 211 or MAT 271
QBA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Must be an Honors student
QBA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**502**	Managerial Decision Analysis	Fundamentals of qualitative and quantitative analysis to aid management decision making in a competitive and uncertain environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	**508**	Product and Service Innovation	Develops strategies for innovation in products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		W.P. Carey Graduate Students only
QBA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		

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QBA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	**505**	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**507**	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**512**	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**521**	Assisting the Struggling Adolescent Reader	Familiarizes teachers with literacy interests, practices, methods, strategies, and resources to develop and enhance students' enjoyment of learning with texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis).	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**530**	Research Issues in Literacy	For graduate students interested in research on major issues related to literacy instruction. Seminar activities include reviewing quantitative and qualitative methods and analyzing literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**534**	Literacy in Science and Math		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
RDG	**550**	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556**	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
RDG	**557**	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
RDG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**581**	Literature-Based Reading Programs		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

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RDG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**596**	Gender, Culture, and Literacies	Influence of gender and culture on written, oral, and post-typographical texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**630**	Research in Literacy	For advanced graduate students interested in applied research problems, literature of literacy instruction, and major issues related to literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Credit is allowed for only EDT 634 or RDG 634
RDG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
RDG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**531**	Language and Literacy I	Instructional strategies for teaching reading using systematic, research-based phonics to aid decoding, vocabulary, comprehension development, writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**532**	Language and Literacy II	Applies literacy strategies including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, and extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**550-W**	Practicum Experiences in Reading	Experience utilizing reading diagnostic and instructional techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556-W**	Assessment Procedures in Reading	Techniques for classroom and clinical reading assessment and instruction. Emphasizes continuous assessment. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RDG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**301**	Literacy and Instruction in the Content Areas	Required course for all Secondary Education candidates. Introduces theory and instructional strategies for learning from text across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**322**	Language Literacy 1 in Elementary Schools	Instructional strategies for teaching reading using systematic research-based phonics to aid decoding; vocabulary; and comprehension development; writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**323**	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**334**	Children'sLiterature and Elementary School Curriculum	Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	HU	
RDG	**413**	Language Literacy 2 in Elementary Schools	Applies literacy strategies, including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**414**	Teaching Reading and Decoding	Emphasizes teaching reading as part of an integrated classroom curriculum. Includes strategies and skills for teaching decoding (phonics), vocabulary, comprehension, study skills, and content area reading.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**440**	Computer Gaming, Learning, and Literacy	Examines the principles of learning underlying well-designed video and computer games. Addresses the literacies involved in such games.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**481**	Reading Practicum		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		

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RDG	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
RDG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
RDG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RE	**302**	Life and Letters of Paul		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Supply Chain Management	3.		
RE	**584**	Internship		Y	LEC	Y	CNV	W.P. Carey School of Business	Department of Supply Chain Management	3.		
REA	**300**	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
REA	**331**	Real Estate Finance	Legal, market, and institutional factors related to financing proposed and existing properties. Emphasizes current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student. In addition to individual course prerequisites, nonbusiness students must have at least a 2.50 ASU cumulative GPA, a 2.50 ASU business GPA, and 56 earned semester hours to register for any upper-division business course unless otherwise noted.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
REA	**380**	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	**401**	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**441**	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**456**	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		

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REA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
REA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
REC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**501**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
REC	**502**	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**530**	Recreation and Tourism Service Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**552**	Critical Issues in Recreation and Tourism	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**555**	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**569**	Advanced Tourism Studies	Advanced survey of tourism literature with an emphasis on relevant theories, concepts, and current research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**570**	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**579**	Tourism Analysis	Examines theories and methods that govern tourist behavior and their relevance to destination development, operations, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		

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REC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
REC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
REC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		
REC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
RED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
RED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites:Total Earned Hours must be less than or equal to 75 Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**205**	Living and Dying	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world. Lecture, discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	

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REL	**210**	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**225**	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**230**	Intro to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only JST or REL 230
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
REL	**260**	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**301**	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**307**	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, or 105, or 108 with a grade of C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	**314**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102 (or 105, or 108) with a grade of C or better. Students who have credit for PHI 390 may not enroll in REL 314
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**317**	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**318**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**323**	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**324**	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

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REL	**326**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**330**	Native American Religious Traditions	Presents world views and religious thought through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**331**	History of Native American Religious Traditions	Role of religion in Native American history, including missionization; religious adaptation; and prophetic, messianic, and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**332**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**343**	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**344**	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**346**	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**350**	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**351**	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	
REL	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**355**	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**356**	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better or currently enrolled
REL	**357**	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L & G	Pre-requisties:ENG 102, (or 105, or 108) with a grade of C or better
REL	**362**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, SGS 366, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or REL 362
REL	**363**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
REL	**365**	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**366**	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

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REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**372**	formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**373**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**375**	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	**377**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**379**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**380**	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**382**	Religion, Magic, and Science	Relationship and conflict among religion, magic, and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**383**	Origins, Evolution, and Creation	Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and scientific creationism in American culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**384**	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**385**	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**386**	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
REL	**388**	Religion, Ethics, and International Politics	Explores the religious and ethical dimensions of international politics by examining historical and contemporary ideas, movements, issues, and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
REL	**393**	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**395**	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with C or better
REL	**396**	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled

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REL	**405**	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Religious Studies undergraduate student
REL	**410**	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**427**	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**430**	Mesoamerican Shamanic Cosmographies	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**444**	Religion in Japan	Religion in Japanese history, especially the development of Japanese Buddhism, and religion in the modern transformation of Japan.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**460**	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**461**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only AFS 480, SGS 442 or REL 461
REL	**470**	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**471**	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**480**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	G	
REL	**482**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	**483**	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
REL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		

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REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**501**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
REL	**502**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**581**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**582**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**585**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

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REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**603**	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Phd or Masters student in Religious Studies
REL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**720**	Approaches to North American Religious History	Traces narratives and approaches to imagine and reimagine the "plot" of American religious history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: PhD in Religious Studies student
REL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**300**	Research, Writing, and Thinking in Religion and Applied Ethics	Theoretical and methodological tools to study world religions' beliefs, practices, and communities and their intersections with ethical perspectives on problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C & H	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater or be currently enrolled.
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**490**	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	THE	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
REL	**492**	Honors Directed Study		Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**493**	Honors Thesis		Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C & H	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Minimum CUM GPA of 2.00
ROM	**101**	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**201**	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**313**	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 201
ROM	**314**	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 313
ROM	**411**	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	**412**	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ROM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RTM	**451**	Grant Writing for Human Service Professionals	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
RUS	**101**	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**102**	Elementary Russian	See RUS 101. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**201**	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**202**	Intermediate Russian	See RUS 201. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**211**	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**212**	Basic Russian Conversation	See RUS 211. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**311**	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**312**	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**321**	Foundations of Russian Literature	Literary movements, prose, poetry, and drama from early Kievan writings to 19th-century works of Pushkin, Lermontov, Gogol. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	
RUS	**322**	Great Russian Writers of the 19th Century	Surveys the great age of prerevolutionary Russian prose, including works of Gogol, Turgenev, Dostoevski, Tolstoy, and Chekhov. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**323**	Modern Russian Literature and the Soviet Legacy	See also SLC 323. 20th-century Russian writers: their prose, poetry, drama; problems of the writer in Soviet and post-Soviet society. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
RUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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RUS	**411**	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**412**	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**417**	Applied Russian Phonetics	General improvement in the student's language skills through aural/oral training in Russian phonology and an analysis of Russian orthography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites: RUS 102 with C or better
RUS	**420**	Russian Poetry	Development of Russian poetry from its beginnings to the present, including both native and emigre poets. Topics in criticism and the study of poetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**421**	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**423**	Dostoyevsky	Dostoyevsky's major works of fiction, including Crime and Punishment and Brothers Karamazov. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**424**	Tolstoy	Tolstoy's major works, including War and Peace and Anna Karenina. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**425**	Chekhov	Chekhov's major works, representative short stories and major plays, including The Cherry Orchard and Three Sisters. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**430**	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**441**	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
RUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
RUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**495**	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
RUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		

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SAO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	**494**	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**496**	Study Abroad	Courses with the prefix SAO numbered 496 and 596 are reserved for Study Abroad Office study abroad and exchange programs. This is a placeholder course. Students must register for the number of credits equivalent to full-time study here at ASU. For most programs, participating undergraduate students register for 12 semester hours and graduate students register for 9 semester hours. Students participating in an SAO Study Abroad Program must register for the subtopic SAO: Study Abroad Program; participants in an SAO Exchange Program will register for the subtopic SAO: Exchange Program. Following completion of the student's international program, this course will be dropped and will be replaced by the ASU equivalencies of those courses completed on the program. In this way, actual credits and grades earned for particular courses completed on SAO programs will be recorded at ASU.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**596**	Study Abroad	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**598**	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**200**	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**300**	Interdisciplinary Approaches to Social and Behavioral Sciences	Interdisciplinary approach to the study of social life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**301**	Cultural Diversity	Socially structured differences in historical and cross-cultural perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & C	
SBS	**302**	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**303**	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**304**	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	
SBS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SBS	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**351**	Population Geography	Demographic patterns. Spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: must have completed MAT 117,or119, or142, or 170,or 210 with a grade of C or greater; or be currenlty enrolled in one of these
SBS	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**404**	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: must have completed SBS 303 and SBS 304 with a grade of C or greater.
SBS	**410**	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**430**	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**440**	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**450**	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**460**	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**461**	Program Evaluation and Policy Research	Examines design, data collection/analysis, and political/ethical issues in planning and evaluating social programs and policies in community organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: AJS 302, COM 308, PSY 290, SBS 302 or SBS 303
SBS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SBS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SBS	**490**	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**491**	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SBS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SCM	**300**	Global Supply Operations	Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA; ACC 241 or ACC 271, CIS 105 or CIS 220 or CIS 236, and ECN 221 with a grade of C or greater.
SCM	**301**	Supply Chain Management	Examines the purchasing, materials, and logistics management areas. Presents techniques for acquiring, storing, processing, and moving material inventory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
SCM	**303**	Honors Global Supply Operations	Explores the principles, concepts, and tools of supply chain management, with emphasis on how these are applied in the business world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; ACC 241 or ACC 242 or ACC 271, and ECN 221 or ECN 231 with a grade of C or better
SCM	**345**	Logistics Management	Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisite: W.P. Carey Supply Chain Management BS student; Co- or Pre-requisite: SCM 300 or 303 with a grade of C or better or be currently enrolled or co-enrolled.

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SCM	**355**	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	**415**	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites:SCM 300 or SCM 303 with a grade of C or better
SCM	**432**	Planning and Control Systems for Supply Chain Management	Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management. fee	N	LAB	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 345 with C or better; Pre/Co-requisite: SCM 355
SCM	**440**	Quality Management/Measurement	Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	**455**	Research and Negotiation	Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 355 with a grade of C or greater
SCM	**463**	Global Supply Chain Management	Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey BS or BA student; Must have completed SCM 300 with a grade of C or greater.
SCM	**479**	Supply Chain Strategy	Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 432 with a grade of C or greater
SCM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Pre-requisites: Must be an Honors student
SCM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite: SCM 300 or SCM 303
SCM	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
SCM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	**502**	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	**511**	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**515**	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**520**	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: SCM 502 with C or better
SCM	**521**	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**532**	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**541**	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**551**	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**581**	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

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SCM	**586**	High-Technology Project Management	Project management processes for high-technology organizations, including planning, scheduling, team development, and control.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**587**	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**588**	Strategic Project Management	Overview of strategic project management processes, project planning and control, project portfolio management, resource allocation, management of strategic project partners.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
SCM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
SCN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
SCN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SCN	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SED	**502**	Equity in Mathematics and Science Education	Introduces equity issues in science and mathematics as they relate to gender, social class, and ethnicity. Examines current research in these areas.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		
SED	**522**	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student
SED	**523**	Middle School Curriculum and Organization	Overview of the organization, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**528**	Organizing and Managing the Middle/Secondary Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		

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SED	**529**	Dynamics of Effective Teaching	Explores and applies new research regarding learning, motivation, and retention. Has immediate application and results for classroom teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**530**	Introduction to Middle School Concept, Philosophy, and Curriculum	Overview of the concept, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**533**	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be a graduate student
SED	**544**	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**577**	Issues and Trends in Secondary Education	Analyzes lay and professional reports; problems and issues in American secondary education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**711**	Secondary Curriculum Development	Theories and processes of developing curriculum; evaluation of research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 522 and a Y in SED 478 or SED 578
SED	**722**	Improvement of Instruction in the Secondary School	Evaluates the research; issues and theories related to the improvement of instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 533
SED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**501**	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**520**	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**547**	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**560**	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**561**	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**576**	Field Experience	Applies course content in secondary and middle school science and mathematics classrooms: observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**578**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**579**	Apprentice Teaching in Secondary Education	Apprentice teaching in secondary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
SED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**321**	Critical Issues in Secondary Education	Examines perspectives of critical issues in contemporary education and encourages students to think critically and to develop their own viewpoints.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**322**	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**397**	Field Experience II	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**464**	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**478**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**480**	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**481**	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**482**	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**496**	Field Experience III	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SEM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-3		
SEM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SEM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		If you have credit for PHY 552, or MSE 552, or NAN 552, you may not enroll in SEM 552
SEM	**553**	Electron Microscopy Laboratory I	Lab support for SEM 552.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	1.		
SEM	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**555**	Electron Microscopy Laboratory II	Lab support for SEM 554.	N	LAB	N	OPT	Graduate College	Center for Solid State Science	3.		
SEM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-12		
SEM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SES	**100**	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SES	**101**	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
SES	**102**	Earth, Solar System, and Universe II	Continuation of SES 101. Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: SES 101 with C or better
SES	**103**	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
SES	**104**	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing. fee	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	**210**	Engineering Systems and Experimental Design	Scientific and engineering design process. Defining scientific problems, generating and evaluating engineering solutions. Computer modeling, technical writing and teaming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 113 or PHY 121 with D or better or currently enrolled; ENG 101, ENG 105 or ENG 107 with D or better or currently enrolled; MAT 265 or MAT 270 with D or better or currently enrolled
SES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**311**	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: MAT 265 or MAT 270; PHY 121 or CHM 113 or BIO 188
SES	**330**	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.		Pre-requisites; PHY 131; PHY132; SES 394 Topic: Concepts of Electrical & Mechanical Engineering Design, with C or better
SES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**410**	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 311
SES	**411**	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SET	**540**	Explosives Surety	Physical and chemical nature of explosives; detonation models; initiating systems; commercial, military, and improvised explosives; investigations; and counter measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**560**	Physical Security I	Systems engineering principles and concepts to guide the design, analysis, and implementation of protection systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**561**	Physical Security II	Scientific theory behind analysis of physical protection systems. Includes probability and statistics, data collection techniques, algorithm processing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**570**	Security System Instrumentation	Operating principles, limitations, and test procedures of security instrumentation and sensors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
SET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
SET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
SET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
SGS	**101**	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
SGS	**102**	Thinking Globally: Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**103**	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	**111**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
SGS	**294**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**301**	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
SGS	**303**	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	**304**	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 101 and ENG 102 with a C or better
SGS	**305**	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L	Pre-requisites:Eng 101 (or 107) and Eng 102 (or 105 or 108) with a grade of C or better
SGS	**310**	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites:SGS 101 or SGS 301 and SGS 103 or SGS 303 with C or better
SGS	**311**	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**320**	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**341**	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**343**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & G	
SGS	**344**	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**366**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History), REL 362 or SGS 366
SGS	**381**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G & H	
SGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**441**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**442**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**454**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	May not enroll in SGS 454, if received credit for WST 447, or TCL 447
SGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
SGS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		
SGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**102**	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 101 with C or better; taken within the past two years
SHS	**105**	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SHS	**201**	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 102 with C or better and taken within the past two years
SHS	**202**	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 201 with C or better and taken within the past two years
SHS	**250**	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**310**	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY 101
SHS	**311**	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY101; SHS 105
SHS	**350**	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**367**	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	
SHS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**375**	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310; SHS 311
SHS	**376**	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**401**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 401 or 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311 with D or better; Students who have credit for SHS 501, may not enroll in SHS 401
SHS	**402**	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 250
SHS	**431**	Developmental Speech Disorders	Introduces the nature of articulation, fluency, resonance, and voice disorders in childhood.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**450**	Observation	Opportunity to obtain observation experience at the ASU Speech and Hearing Center or at external sites.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		

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SHS	**465**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	Pre-requisites: Credit is allowed for only SSH 465 or 565
SHS	**470**	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**473**	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**483**	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**485**	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310
SHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6	L	Pre-requisites: Must be an Honors student
SHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**496**	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311, 375 and 401 with "D" or better; Students who have credit for SHS 596, may not enroll in SHS 496
SHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-7		
SHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		
SHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		Pre-requisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**501**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 501 or 401.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 401, may not enroll in SHS 501. SHS 311 with C or better
SHS	**502**	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisite: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**504**	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**505**	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**508**	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**510**	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**511**	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**512**	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**513**	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**515**	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**516**	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student

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SHS	**517**	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**518**	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**519**	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**520**	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**521**	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**522**	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**523**	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 502 and SHS 513. SHS majors only
SHS	**524**	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2-3		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**525**	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**545**	Speech Perception by the Hearing Impaired	Focuses on the perception of speech by normal-hearing and hearing-impaired listeners.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**552**	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**555**	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**565**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 465, may not enroll in SHS 565
SHS	**566**	Psychology of Language	Psycholinguistic study of the production and comprehension of language across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**567**	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**570**	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**571**	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**572**	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**573**	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**574**	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**575**	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**576**	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**577**	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**578**	Disorders of Voice	Communication disorders related to dysfunction of the phonatory and resonance systems of voice production, assessment, and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**579**	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student

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SHS	**580**	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**581**	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**582**	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**584**	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**585**	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**586**	Language Sampling Methods in Speech-Language Pathology	Focuses on the use of language sampling and analyzes techniques to assess children's language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**587**	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**588**	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**589**	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**596**	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Credit is allowed for only SHS 496 or 596
SHS	**597**	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Must be a graduate student
SHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		

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SHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		
SLC	**150**	Introduction to East Asian Culture	Introduces the cultures of China, Japan, and Korea.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**201**	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU or SB	
SLC	**202**	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**323**	Survey of Literature of the Soviet Era in Translation	Surveys main literary movements, prominent authors, most significant works of prose, poetry, and drama of the Soviet period, 1917-1991.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**385**	Career Development for Language Majors	Theoretical and practical aspects of career planning and development; research focus on language-related careers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 101 or ENG 107 with D or better; ENG 102 or ENG 108 with D or better or currently enrolled
SLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**400**	Linguistics	Introduces the analysis of language and its use in social contexts. Topics: morphology, phonology, pragmatics, semantics, syntax, and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	Pre-requisite: Junior academic level
SLC	**401**	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**415**	Bilingualism and Languages in Contact	Analyzes linguistic aspects of bilingualism, e.g., pidgins and creoles, code-switching, and other contact phenomena; simultaneous/sequential bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better or currently enrolled
SLC	**420**	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**421**	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**440**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
SLC	**450**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200; ENG 200-level literature course, or FMS 100; FMS 200 . Students who have credit for ENG 447 or FMS 442 may not enroll in SLC 450
SLC	**461**	Feminist Political Writing in Contemporary Europe	Examines the discourse of gender-politics in Central Eastern Europe before and after Soviet hegemony.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**464**	Politics of Drama in 20th-Century Europe	Interdisciplinary examination of European drama before and after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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SLC	**472**	Literature and Politics in Pre- and Post-Communist Europe	Interdisciplinary examination of the cultures of Eastern Europe from WWI to the present.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**476**	Literature and Film in 20th-Century Eastern Europe	Evaluates literary texts and films as a massive propaganda machine of the totalitarian state.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**479**	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**480**	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**481**	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**482**	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**483**	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**485**	Problems of Literary Translation	Theory and practice with emphasis on application through individual translation projects. May be repeated for a total of 6 semester hours.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 401 with D or better or currently enrolled
SLC	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Honors students only
SLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	**515**	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better
SLC	**525**	Second-Language Acquisition Trends and Issues in Foreign Language Teaching	Advanced methods seminar, designed for experienced teachers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SLC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SLC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**304**	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	CS	
SLV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**440**	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	
SLV	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLV	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLV	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**220**	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

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SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(L or SB) & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Students who have credit for CDE 312 may not enroll in SOC 312
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**321**	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**331**	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**333**	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**334**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G & H	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**363**	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**375**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(HU or SB) & C	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	CS	
SOC	**391**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Prerequisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390. Credit is allowed for only FAS 361 or SOC 391
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**415**	The Family	Family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**416**	Marriage Problems in Contemporary Society	Marital and family problems in today's society from the viewpoint of personal and cultural adjustment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**417**	Family Violence	Current research and theories about domestic violence including child maltreatment, spousal aggression, and courtship violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**424**	Women and Health	Women as healthcare workers and issues of health, illness, and healthcare for women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**427**	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**429**	Sociology of Law	Examines law as an institution; its origins, operations, and consequences. Emphasizes contemporary legal issues and problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**433**	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for FAS 435, may not enroll in SOC 435
SOC	**446**	Sociology of Crime	Process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**448**	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**451**	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**474**	African Americans in Modern Society	Social and cultural heritage of black Americans; achievements and current trends.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**483**	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
SOC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**501**	Practicum in Survey Research	Research practicum in survey fieldwork, analysis, and reporting in the Phoenix Area Study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**502**	Practicum in Survey Research	Continuation of SOC 501.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**503**	Academic Professional Development	Becoming and working as an academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**504**	Sociology as a Profession II	Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**505**	Applied Regression Analysis	Multiple linear regression topics relevant to sociological data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**507**	Social Statistics IIA: Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in sociology. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**508**	Social Statistics IIB: Structural Equation Analysis	Structural equation models using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**509**	Social Statistics IIC: Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**512**	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**515**	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**516**	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**519**	Graduate Medical Sociology	Current developments in medical sociology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**523**	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**533**	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		

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SOC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**585**	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**588**	Methodological Issues in Sociology	Basic methodological issues in the study of human social life. Emphasizes a limited number of key issues and approaches to research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**210**	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**328**	Migration	Introduces the definition and analysis of migration in all forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
SOC	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
SOC	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**364**	Popular Culture	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**366**	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**400**	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**419**	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**443**	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**456**	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**457**	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**492**	Honors Directed Study		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	**100**	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	G	
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**111**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	(HU or SB) & G	
SOS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**300**	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Sustainability minor. SOS 100 with C or better; 6 hours from two Sustainability themes
SOS	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**320**	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	L or SB	Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**321**	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**322**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**323**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better; Credit for SOS 323 or SOS 465 or PUP 465 only
SOS	**324**	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better
SOS	**325**	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**326**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	SB	
SOS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	School of Sustainability	School of Sustainability	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SSH 414, may not enroll in SOS 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SOS	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in BIO 424 or ASM 424, may not enroll in SOS 424

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SOS	**430**	Sustainable Economic Development and Social Transformation	A clustered learning network on the application of sustainability principles to the evaluation of economic development strategies at the national, regional, and local levels, using case studies. May be repeated once for credit.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**431**	Resilience and Sustainability	A clustered learning network on the application of resilience analysis to the evaluation and management of the sustainability of coupled social-ecological systems using case studies. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**433**	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with a C or better. 45 hours earned. Sustainability Majors, credit allowed only for SOS 323 or SOS 465
SOS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**492**	Honors Directed Study		Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		
SOS	**493**	Honors Thesis		N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Pre-requisites: Must be an Honors student
SOS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**499**	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	**510**	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**511**	Methodology of Sustainability Research and Problem Solving	Provides a sense of when, where, and how quantitative methods are used in studying questions related to sustainability; a road map for furthering quantitative skill sets; and opportunities to refresh and build some basic mathematical skills from selected topics in differential and integral calculus, linear algebra, and probability and statistics that will be required for further study.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**512**	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**513**	Science for Sustainability	Carbon cycle, nutrient cycles, carbon and nutrients in the oceans, climate change, oxygen and ozone, solid waste pollution, urban air pollution.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**515**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**516**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 516 if you have credit in GLG 547, or PAF 547, or BIO 515
SOS	**530**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale. Credit is allowed for only SOS 530 or SOS 322.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**532**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:May not enroll in SOS 532, if credit received for ASB 533

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SOS	**533**	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**534**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**535**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**536**	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Studentso choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**540**	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to enable them to understand and critique empirical research papers and to conduct their own basic quantitative analysis. Exposes students to applications of statistical methods in the literature to foster an understanding for how statistical and econometric tools are utilized in the research community and to develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations, and command of statistical tools that constitute quality empirical research. Class sessions primarily focus on the development of the necessary theoretical "toolbox"; practical skills in the use of a statistical software package and in interpreting its output are fostered through problem sets.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**550**	Introduction to Sustainability and Organizational Strategies	Focuses on organizational strategies for technology companies competing in a global environment. Strategic and tactical decision implications of a life cycle value proposition; modeling and analysis for strategic decisions about product/service bundles and delivery mechanisms; innovation; technology, including the linkages to the firm strategy and empirical evidence; supply, demand, and value chain; research of laws, guidelines and international agreements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**551**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 551 if you have credit in CEE 544
SOS	**552**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Students who have credit for CEE 581, may not enroll for SOS 552
SOS	**559**	Sustainable Technology and Management Capstone	Provides opportunity to demonstrate comprehension of the fundamental aspects that have been introduced in the classroom and the synthesis of these fundamental aspects into a demonstrable project that can be presented and defended.	N	STO	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		

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SOS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SP	**431**	Prose of Golden Age		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.		
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Must be a freshmanwith 25 or less total earned hours
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**203**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not enroll in SPA 203 if they have received a D or better in SPA201,202,204,311,312,313,314,315,316,325,412
SPA	**204**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 204 or SPA 202, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	May not enroll in SPA 313 if received a D or better in SPA 314,315, 316,325,412
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412
SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412
SPA	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: SPA 314 or 316
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**400**	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre/co-requisite: SPA 413; Credit is allowed for only SPA 400 or SPA 539
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**417**	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SPA 412 with a grade of D or better, or in progress
SPA	**418**	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 413 with C or better
SPA	**420**	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413 with D or better
SPA	**421**	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or SB) & C	Pre-requisites: SPA 412 with C or better
SPA	**422**	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 412
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325

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SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L & G	Pre-requisite: SPA 325
SPA	**429**	Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuilxóchitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**431**	Prose of Golden Age		N	LEC	N	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**434**	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderón de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**435**	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**454**	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**456**	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**471**	Civilization of the Spanish Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & C	Pre-requisites: SPA 314 or 316
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**473**	Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & G	Pre-requisties:SPA 314 or 316 with a grade of D or better or currently enrolled
SPA	**474**	Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**485**	Mexican American Short Story	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325
SPA	**486**	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**487**	Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
SPA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**534**	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**536**	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**537**	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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SPA	**538**	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**539**	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**540**	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**541**	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**542**	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**543**	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**544**	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**545**	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**547**	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 400 or SPA 539
SPA	**552**	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marín, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**555**	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**557**	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**560**	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**561**	Golden Age Spanish Prose Fiction	Major figures and works of the 16th and 17th centuries, with emphasis on the picaresque novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**562**	Golden Age Spanish Poetry	Major figures and works of the 16th and 17th centuries, with emphasis on lyric poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**563**	Spanish Romanticism	Principal figures and works of Spanish romanticism, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**564**	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**565**	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**566**	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**567**	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**568**	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**569**	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**570**	Indigenous Literatures of Spanish America	Indigenous literary traditions, with emphasis on Nahuatl, Mayan, and Quechua literatures through readings in Spanish translations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**571**	Colonial Spanish American Literature	Major figures and works from conquest to independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**572**	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**573**	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**574**	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**575**	Contemporary Spanish American Novel	Principal novels of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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SPA	**576**	Contemporary Spanish American Short Story	Principal short stories of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**577**	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**578**	Novel of the Mexican Revolution	Representative works and authors of this genre (Guzmán, Azuela, Urquizo, Muñoz, and Romero), including related or peripheral offshoots in indigenous novels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**581**	Latin American Popular Culture	Studies in selected topics of Latin American popular culture, with emphasis on appropriate academic models for the critical analysis of these materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**582**	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**585**	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlica, Suárez, Ulibarrí, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**586**	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**587**	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory an other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**588**	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**589**	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SPA	**601**	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**791**	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**107**	Spanish for International Professions I	Accelerated program alternative to SPA 101, 102 sequence. Functional approach to needs of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**207**	Spanish for International Professions II	Continuation of SPA 107, alternative to SPA 201, 202 sequence. Expansion of communicative proficiency in specific areas of international professions. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	8.	G	
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**312**	Spanish Conversation	See SPA 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: Must have completed SPA 202 with a grade of C or greater.
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412

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SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: SPA 314 or SPA 316 with D or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites:SPA 314 or SPA 316 with a grade of D or better or enrolled
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L & G	Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing. Credit is allowed for only SPA 101 or 111. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	See SPA 101. Credit is allowed for only SPA 102 or 111. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study. Credit is allowed for only SPA 111 or both SPA 101 and 102. fee	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		You may not sign up for SPA 111 if you have received a D or better in SPA111,201,202,203,204,311,312,313,314,315,316,325,412
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**202**	Intermediate Spanish	See SPA 201.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	May not enroll in SPA 202 if received a grade of D or better in SPA 204, 311-316, 325 or 412
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites:SPA 313 or SPA 315 with a grade of D or better or in progress
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPE	**316**	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
SPE	**511**	The Exceptional Child	Educational needs of exceptional children and adults. Not recommended for students who have completed SPE 311.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**512**	Individuals with Mental Retardation	Etiology, diagnosis, and management of individuals with mental retardation. Current trends in prevention, programming, and teacher preparation. Not recommended for students who have completed SPE 312.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**514**	Bilingual/Multicultural Aspects of Special Education	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**519**	Inclusion Methods: Science, Social Studies, and Mathematics	Instructional strategies used for delivery of science, social studies, and mathematics with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**521**	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**524**	Effective Classroom Behavior Management	Organization and delivery of instruction including formative evaluation and techniques of academic behavior management for exceptional children. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**525**	Social Behavior Interventions	Analysis and intervention into social behavior problems of exceptional students. Focuses on strategies to change maladaptive social behavior. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**531**	Methods of Applied Behavior Analysis for Exceptional Populations	Behavior management approaches for classroom behavior of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**536**	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**537**	Instructional Management: Reading and Language Arts	Instructional strategies used for delivery of reading and language arts with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPE	**548**	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**550**	Inclusion Practices in Science and Mathematics	Facilitates and expands knowledge in the practical application of strategies meeting diverse needs of learners in science and mathematics classrooms	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**551**	Teaching Young Children with Special Needs	Methods, materials, and curriculum for preschool and primary-aged children with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**553**	Developmental/Functional Assessment	Teacher-focused developmental/functional assessment of preschool and severely, physically, and multiply handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Graduate student
SPE	**561**	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**566**	Applied Behavior Analysis in Inclusive Settings	Definitions, characteristics, assumptions, and basic principles of behavioral analysis as applied to social skills in inclusion settings.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**574**	Educational Evaluation of Exceptional Children	Design and statistical considerations of normative and criterion-referenced tests. Collection, recording, and analysis of data from formative evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SPE	**575**	Survey and Current Issues for Children with Special Needs	Mainstreaming, noncategorical, financing, legal diagnostic, labeling, legislative, and other critical and controversial issues related to the education of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**577**	Inclusive Teaching and Learning	Develops successful learning environments for students using evidence-based instructional approaches, collaborative teaching models, and culturally responsive practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**582**	Research and Evaluation in Special Education	Introduces interpreting research. Specific research techniques with primary emphasis on classroom research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**585**	Creativity: Research and Development	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**586**	Advising the Gifted Child	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**587**	Controversies in Educating the Gifted	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**588**	The Gifted Child	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**589**	Methods in Teaching the Gifted	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be graduatie student in Special Education
SPE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be a graduate student in Special Education
SPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate students only
SPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be a graduate student in Special Education
SPE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only

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SPE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Must be a graduate student in Special Education
SPE	**702**	Conducting Research with Special Populations	Considers concepts and methodologies for conducting research with any aspect of special education, including gifted and multicultural.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Must be Graduate(doctoral) student in Special Education
SPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite:Must be a graduate student (doctoral) in Special Education
SPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be a grad(doctoral) student in Special Education
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**532**	Systems, Policies, and Program Practices	Analyzes historical, political, social, and legal factors impacting special education services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**533**	Issues and Foundations in Special Education	Foundational themes and issues in special education. Critical issues related to characteristics of students with mild emotional disturbance, behavior disorders, learning disabilities, mental retardation, orthopedic, and other health impairments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**534**	Assessment and Evaluation for Children with Special Needs	Discusses assessment practices related to student eligibility and program planning. Emphasizes authentic, individualized, interdisciplinary practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**535**	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**540**	Family Centered Practices	Issues associated with families and family systems. Effects of disabilities on families. Strategies for family support and empowerment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**541**	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SPE	**544**	Assessment and Evaluation of Infants and Young Children	Developmental assessment and related program planning for infants and young children. Emphasizes authentic, individualized, family-centered and culturally competent approaches.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children with diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**555**	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**578**	Student Teaching in Special Education	Y grade only. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**579**	Apprentice Teaching in Special Education	Apprentice teaching in special education setting. Must be taken four times for a total of 12 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**222**	Orientation to Education of Exceptional Children	Includes gifted, mildly handicapped, severely handicapped, and the bilingual/multicultural exceptional child.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB & C	
SPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SPE	**310**	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**312**	Mental Retardation	Characteristics and assessment specific to mental retardation. Emphasizes terminology, development, educational programming, and therapeutic procedures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**314**	Introduction to Bilingual/Multicultural Special Education	Theoretical background and practical application of general issues regarding the education of bilingual/multicultural handicapped children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**317**	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**318**	Family-School Collaboration	Explores relationships between families of children with special needs and professionals in educational institutions and community agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**320**	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**322**	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**336**	Behavioral and Emotional Problems in Children	Characteristics and assessment specific to emotionally and behaviorally disturbed children. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**361**	Introduction to Learning Disabilities	Characteristics and assessment specific to learning disabilities. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**396**	Field Experience I	Applies course content while working with students with disabilities in inclusive settings. Emphasizes classroom and behavior management. Fee.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**397**	Field Experience II	Applies course content in a special education setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**411**	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**412**	Evaluating Exceptional Children	Normative and criterion-referenced diagnostic techniques, including formative evaluation. Emphasizes application. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**413**	Methods in Language, Reading, and Mathematics for Exceptional Children	Methods, techniques, and materials for use in prescriptive teaching. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**414**	Instructional Management and Strategies: Reading and Writing	Organization and delivery of instruction, including formative evaluation techniques. Instructional techniques of reading and writing. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**415**	Classroom and Behavior Management	Analysis and intervention into social behavior problems of exceptional populations. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**416**	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators. May be repeated for credit.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**417**	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**419**	Instruction in Content Areas: Science and Social Studies	Develops and implements instructional methods and learning strategies for students with special needs related to science and social studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**423**	Technology & Instructional Methods in Language, Reading, & Mathematics for Special Needs students	Technology and instructional methods in language, reading, and mathematics for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**424**	Methods of Cross-Categorical Special Education	Assessment and instructional methods for students with mild to moderate retardation, learning disability, emotional disabilities, and physical/health impairment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**431**	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**440**	Professional Seminar in Special Education	Examines critical issues in the delivery of special education services. Emphasizes self reflection and professional development.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Student teaching in special education setting.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Y grade only. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		
SPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Must be an Honors student
SPE	**493**	Honors Thesis		N	THE	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**496**	Field Experience III	Applies course content in a special education setting. Emphasizes observation pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**576**	Field Experience	Applies course content in special education classrooms: observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Prerequisite(s): Valid copy of AZ DPS fingerprint card on file at ASU; MEd in Special Education major
SPF	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		

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SPF	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**301**	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L	Pre-requisites: completion of first year composition
SPF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**401**	Teachers and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**402**	Teachers and the Law in Indigenous Communities	Examines the legal rights of students, teachers, and the district while preventing injury to students in indigenous communities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
SPF	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
SPF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
SPF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**501**	Culture and Schooling	Introduces social science concepts of culture and the cultural milieu in which schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**510**	Intro to Organization and Administration of American Public Schools	Curricular practices used in inclusion classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**511**	School and Society	Interrelationship of school and society and the role of education in social change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**515**	Gender and Education	Methods and materials for remediating the basic academic problems of exceptional children. Prerequisite: admission to MEd in Special Education program.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**520**	Cultural Diversity in Education	Philosophic and sociological investigation of cultural diversity in the United States and how it relates to education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**530**	Sociology of Education	Current issues in the sociology of education: stratification, social mobility.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**534**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 534 or 634.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**544**	Philosophical Foundations of Education	Theories of education in ancient, medieval, and modern classical and contemporary philosophies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**597**	Teacher and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science and the law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**603**	Visual Ethnography in Education	Advanced qualitative methods class combining ethnography with the use of video and still photography in data gathering and presentation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**612**	Evaluation Theory	Explores the major theories of evaluation (inquiry leading to value judgments) in educational policy through examination of cases.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**622**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**634**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 634 or 534.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
SPF	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		
SPF	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**711**	Social and Historical Foundations of Education	Explores the history of sociological thought, especially theories of the relations between educational systems and the social/cultural world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
SSH	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111. Students who have credit for ASB 200, may not enroll in SSH 200
SSH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better. If you have credit in ASB 301,or HST 301 you may not enroll in SSH 301
SSH	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: Students who have credit for ASB 355, may not enroll in SSH 355
SSH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**400**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	Pre-requisites: ASB 100 (or SSH 100) or ASB 102 with D or better
SSH	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 or ASM 104 with D or better or currently enrolled; SSH 100 with D or better or currently enrolled
SSH	**402**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better or currently enrolled. If you have credit in ASB 452, you may not sign up for SSH 402
SSH	**403**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for ASB 443, you may not enroll in SSH 403
SSH	**404**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
SSH	**405**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SOS 414, may not enroll in SSH 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SSH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**493**	Honors Thesis		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	**502**	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: SSH 510 or ASB 510 completed with D or better or currently enrolled
SSH	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511 with D or better. Must be graduate student
SSH	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 500 completed with D or better or currently enrolled; SSH 511 or ASB 511 completed with D or better or currently enrolled
SSH	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
SSH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SSH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
STM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
STM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
STP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**231**	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Prerequisites: MAT 117 or 142 with C or better
STP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 210 or 251 or 265 or 270 with C or better
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**425**	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	**427**	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: STP 421 with C or better
STP	**429**	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: STP 420 with C or better
STP	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
STP	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student

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STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	**525**	Advanced Probability	Measure-theoretic foundations of probability, distribution functions and characteristic functions, laws of large numbers and central limit theorems, conditional probabilities, martingales, and topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**526**	Theory of Statistical Linear Models	Multinormal distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**527**	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**530**	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**531**	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**532**	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**533**	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**534**	Applied Discrete Data Analysis	Models for discrete and count data, measures of association, and log-linear and regression models for contingency tables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**535**	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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STP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**300**	Introduction to Probability	Probability models and computations, joint and conditional distributions, moments, families of distribution, stochastic processes, simulation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT210 with a grade of C or greater or be currently enrolled.
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
STP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STS	**101**	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**110**	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**301**	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**302**	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: ENG 101, ENG 105, ENG 107 or ENG 111 with C or better
STS	**303**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STS	**304**	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**305**	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**306**	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**317**	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**318**	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**325**	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**328**	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**329**	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**330**	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**331**	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**332**	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**364**	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites:STS 101 and STS 301 with a grade of D or better
STS	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**401**	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:Completed STS 301 with a grade of D or better
STS	**425**	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
STS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
STS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		

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SWG	**501**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**502**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**503**	Development of Families in Oppressive Context	Addresses the development of healthy families and children. Explores essential tasks of human development and theories that inform practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be admitted to MSW.
SWG	**504**	Theories of Human Behavior	Addresses development of healthy adults and human behavior in groups, organizations, and communities.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; SWG 503 with a C or better or currently enrolled
SWG	**510**	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	**511**	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better
SWG	**512**	Values and Ethics of Social Work Practice I	Develops a basic understanding of diverse ethical systems and their application to a broad range of human problems in various social and cultural contexts.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student
SWG	**513**	Social Work Generalist Practice II	Building on SWG 512, continues to develop and apply a generalist framework of social work practice. Examines theories of practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be admitted to the MSW and have completed SWG 512 with a grade of C or greater
SWG	**519**	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**520**	Research and Advocacy	Develops knowledge and skills needed to utilize and engage in social research related to advocacy issues and the evaluation of social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**531**	Social Policy and Services I	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral of Social Work student
SWG	**532**	Policy and Social Change	Overview of the history, development, pertinent concepts, skills, and definitions associated with social welfare problems and policies.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**533**	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student.
SWG	**534**	Diversity and Underserved Populations	Examines issues of privilege and oppression, including their impact on the social work process, with the goal of developing a culturally competent master's-level social worker.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**540**	The Professional Experience I	150 clock hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; Co-requisite: SWG 512
SWG	**541**	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Master or Doctor Social Work student; Pre or Co-requisite: SWG 510 with a grade of C or greater if completed
SWG	**542**	Field Practicum II	See SWG 541. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG510, SWG541, and SWG 511 with a C or greater or be currently enrolled (or be enrolling in SWG511)
SWG	**543**	The Professional Experience II	250 hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: Master of Social Work student; SWG 512 with C or better; Co-requisite: SWG 513
SWG	**550**	Co-Occurring Disorders	Provides sound theoretical and practical orientations to working with persons who have co-occurring disorders.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**551**	Crisis Intervention	Covers the basics of crisis intervention in social work practice, along with applications to several different populations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**552**	Issues in School Social Work	Provides knowledge and skills necessary to implement effective social work services in a school setting.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**553**	Social Work with American Indians	Introduces social work issues relevant to Native Americans. Explores effective methods with Native American clients.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**554**	Substance Abuse	Psychological and sociocultural determinants of substance abuse. Overview of social policies and treatment approaches.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**555**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWG 555 or SWU 455.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**557**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 557 or SWG 457.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student

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SWG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**585**	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student
SWG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisite: Master or Doctor Social Work student.
SWG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-12		
SWG	**600**	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	**603**	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 502; SWG 511; SWG 542
SWG	**604**	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 603
SWG	**606**	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 502 with C or better
SWG	**608**	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 502; SWG 511; SWG 542
SWG	**609**	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 608 compeleted with D or better or currently enrolled
SWG	**610**	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW or MSW Adv Standing student; Co-Requisite: SWG 693 and 645
SWG	**611**	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	College of Public Programs	School of Social Work	2-3		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 510 completed with C or better; SWG 511 completed with C or better or currently enrolled; SWG 541 and SWG 542 completed with Y or currently enrolled
SWG	**612**	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**613**	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 603
SWG	**614**	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600- level SWG courses.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**615**	Effective Intervention with Children and Adolescents	Provides a framework of knowledge, theories, and skills for effective social work practice with vulnerable children and adolescents.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing
SWG	**616**	Social Work with Chemically Dependent Families	Examines dynamics of the chemically dependent family and presents clinical approaches for intervening in the family system and subsystems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**617**	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**618**	Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**619**	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG519 with a grade of C or greater or be currently enrolled

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SWG	**621**	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 611 completed with a C or better or currently enrolled; SWG 641 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or better if completed
SWG	**623**	Agency and Community-Based Research in Social Work	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Soc Wrk student; SWG 519 or 520 completed with C or greater or currently enrolled; Pre or Co-requisite: SWG 680 with C or greater if completed, or currently enrolled.
SWG	**626**	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing; AND completed SWG 610 with a C or greater
SWG	**630**	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**631**	Advanced Policy Analysis	Supports advanced generalist practice with emphasis on policy analysis and philosophy and politics of resource allocation and social welfare.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either: MSW or MSW Adv Standing
SWG	**632**	Social Policy and Services II	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG531 with a grade of C or greater or be currently enrolled
SWG	**633**	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 542 completed with a Y or currently enrolled
SWG	**641**	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal. fee	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or better or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 611 (with a C or better if completed)
SWG	**642**	Advanced Practicum: Direct Practice II	See SWG 641. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work; SWG 511 & SWG 611 with a C or greater or be currently enrolled; SWG 542 & SWG 641with a Y or be currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or greater if completed
SWG	**643**	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or greater or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 681 or SWG 682 with a C or greater if completed
SWG	**644**	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 511 with C or bettter; SWG 542/643 with a Y grade; SWG 681 or 682 with a C or better; Pre/Co-requisite:SWG 680 with C or better
SWG	**645**	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student; SWG 542 with a grade of Y OR MSW Advanced Standing student; co-enrolled in SWG 610 and SWG 693
SWG	**646**	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either the Standard MSW or MSW Adv Standing; completed SWG 645 with a grade of Y; AND be co-enrolled in SWG 614, and SWG 693
SWG	**650**	Social Work Ethics/Law		N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**653**	Theory and Practice of Family Therapy	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either: MSW or MSW Adv Standing.
SWG	**653**	Introduction to Holistic Therapies	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**654**	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**655**	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**656**	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be a graduate student
SWG	**657**	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Aryuvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**660**	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 681 or SWG 682 completed with a C or greater or currently enrolled; Pre or Co-requisite: SWG 623 with C or greater if completed
SWG	**681**	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater

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SWG	**682**	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**685**	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requistes: SWG 681, 682; Co requisite, SWG 523
SWG	**686**	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisites:Must be a student in either: MSW or MSW Adv Standing
SWG	**697**	Special Topics in Working with Diverse Groups	Provides practice strategies for clients of specific marginalized groups; addresses access to resources; describes the larger political context and policy issues that impact the particular group.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	3.		
SWG	**700**	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**720**	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		
SWG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	**171**	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & H	
SWU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		

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SWU	**250**	Stress Management Tools	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	
SWU	**291**	Social Service Delivery Systems	Introduces federal and state social service delivery systems as well as private social service agencies. Explores purpose and structure of community resources. During the semester, students must complete 40 hours of service learning in a social agency.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 with a D or better or currently enrolled; Pre or Co-requisites: SWU 171 or SWU 271 (with a C or better if completed)
SWU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**295**	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & C	Pre-requisites: PGS 101, SOC 101 or SOC 301 with D or better; Pre or Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	**302**	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credidt.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**303**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	L or SB	Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 completed with a D or greater or currently enrolled; Pre or Co-requisites: SWU 171, SWU 291 and SWU 295 (with a C or better if completed)
SWU	**310**	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	**320**	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: student must have completed SWU310 with a grade of C or greater or be currently enrolled or enrolling during the same term
SWU	**321**	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	**331**	Social Policy and Services I	History, philosophy, and values of social welfare; function and role of social welfare in society; development of the social work profession and practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	H	Pre-requisites: must be a Social Work student and have completed the following with a C or greater or be currently enrolled: ECN 111 or 211, POL 110 or POL 310 or POS 110 or POS 310, SWU 171 or SWU 271, and SWU 291.
SWU	**332**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: student must have completed SWU310 with a grade of C or greater or be currently enrolled/enrolling AND must have completed ECN111 with a grade of D or greater or be currently enrolled
SWU	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**340**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 (SWU 301) with C or better; Pre or Co-requisite: SWU 310 (with C or better if completed)
SWU	**374**	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre/Co-requisite: SWU 310 with C or better if completed
SWU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	**402**	Human Behavior in the Social Environment II	Sequel completing study of life span development and behavior which forms base for social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 with C or better
SWU	**410**	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work undergraduate; SWU310 with C or better; PHI 101, 105 or 306 with D or better; Co-requisites: SWU 412 and SWU 413
SWU	**411**	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU414 and SWU415 AND must be a Social Work major or must have completed SWU410, SWU412, or SWU413 with a grade of C or greater or be currently enrolled
SWU	**412**	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only. fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU413; must have completed SWU310 with C or better; Must be a Social Work major
SWU	**413**	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU412; must have completed SWU 310 with C or better; Must be a Social Work major
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: must be co-enrolled in SWU 411and 415, and completed SWU 410 and SWU 413 with a grade of C or greater or be currently enrolled.
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only. fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	**415**	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	**415**	Field Instruction Seminar II	Field-focused seminar, including practice evaluation. 1.5 hours a week.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1.		Pre-requisites: must be co-enrolled in SWU 411 and 414, and have completed the following with a grade of C or greater or be currently enrolled: SWU 410, SWU 412, and SWU 413.

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SWU	**420**	Practice-Oriented Research	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**432**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 310 with C or better; ECN 111 or ECN 211 with D or better; POS 110 or 310 with D or better; Co-requisites: SWU 410, SWU 412, and SWU 413
SWU	**442**	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**444**	Issues in School Social Work	Demonstrates how community, family, and school are interdependent using an ecological metaphor, and introduces school social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**455**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWU 455 or SWG 555.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**457**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 457 or SWG 557.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**474**	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre-requisite: must have completed SWU 310 with a grade of C or greater or be currently enrolled
SWU	**492**	Honors Directed Study		N	RSC	N	OPT	College of Public Programs	School of Social Work	1-6		
SWU	**493**	Honors Thesis		N	IND	N	Z1	College of Public Programs	School of Social Work	1-6	L	Pre-requisite: must be an honor student
SWU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-7		
SWU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TA	**488**	Elem Air Transport		Y	LEC	Y	CNV	Ira A. Fulton Engineering	INACTIVE - Dept Aeronautical Management Technology	3.		
TCL	**101**	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**111**	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**201**	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**202**	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**211**	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**220**	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**303**	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	

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TCL	**304**	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**305**	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre or Co-requisites: TCL 303 and TCL 304 with a D or better if completed
TCL	**310**	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**314**	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & H & C	
TCL	**315**	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	
TCL	**321**	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**323**	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4.	SB & C	
TCL	**326**	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**327**	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**328**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
TCL	**340**	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**341**	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**342**	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**350**	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C & G	
TCL	**351**	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for ENG 363, you may not enroll in TCL 363. Completed ENG 101, or ENG 107, or ENG 105 with a D or better or be currently enrolled
TCL	**364**	Transborder Chicana/o and Mexican Literature of Southwest North America Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	Pre-requisites: SPA 314 or 316 with C or better
TCL	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	
TCL	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
TCL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**410**	Race, Medicine, and the Body	The ways in which medicine, disease, and health outcomes are affected by culture, gender, and social location.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	**422**	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: TCL 321 with C or better
TCL	**424**	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: TCL 321 with C or better
TCL	**443**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	
TCL	**444**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for ASB 464, may not enroll in TCL 444
TCL	**445**	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Uses a transregional and transborder approach, focusing on the interconnections of this modern genre across the borders of Spanish América. Takes a long historical view of the genre by reading representative stories of important literary movements and the aesthetic and cultural values they promoted and fostered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L or HU	
TCL	**446**	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic ¿minority¿ groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or ¿nuyoricans¿)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & G	Pre-requisites: May not enroll in TCL 447, if credit received in WST 447 or SGS 454
TCL	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
TCL	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Pre-requisites: ENG 102, 105, or ENG 108 with a grade of C or better. May not enroll in TCL 465 if received credit for FMS 465
TCL	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	Pre-requisites: ENG 102, 105 or 108 completed with a C or better; You may not enroll in TCL 470 if you have credit for FMS 470
TCL	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	**485**	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**488**	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples¿ experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		
TCL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Pre-requisites: Must be an Honors student
TCL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TDM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
TDM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**205**	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 with C or better if completed; Credit is allowed for only NLM, TDM or PRM 210
TDM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: PRM 120 or NLM 160) with C or better if completed; Credit is allowed for only NLM, PRM or TDM 301
TDM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre-or Co-requisites: PRM 120 (or REC 120) with a C or better if completed
TDM	**325**	Tourism Accommodations	Local, national, and international overview of the lodging and food service industries.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: RTM 373 or TDM 205 with C or better
TDM	**345**	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**350**	Tourism Marketing	Critical examination of marketing principles; applications to travel, tourism, and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better; Minimum 45 hours
TDM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**372**	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	**386**	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	**401**	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Prerequisite: TDM 210 or PRM 210 with C or better; and TDM 301 or PRM 301 with C or better; and PRM 303 or TDM 372 with a C or better. Students who have credit for PRM 401, may not enroll in TDM 401
TDM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better. Students who have credit for PRM 402, or NLM 402, may not enroll in TDM 402
TDM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303 or TDM 372 with C or better Students who have credit for NLM 403 or PRM 403, may not enroll in TDM 403
TDM	**415**	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**448**	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 with C or better
TDM	**458**	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Prerequisites: TDM 402 (or REC 482) and TDM 403 (or REC 499 Pre Internship Workshop) with a C or better or currently enrolled; Must be a Tourism Development and Management or Recreation (Tourism concentration) student
TDM	**480**	Nature-Based Tourism	Examines the interaction of tourism with culture, natural environment, as well as the impacts of tourism on the environment.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or TDM 205 with a D or better, or RTM 373 with C or better
TDM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
TDM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
TDM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
TEL	**501**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**683**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
TEL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**702**	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**703**	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**711**	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**712**	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action researc, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**713**	Applied Mixed Methods of Inquiry	Data collection, analysis, interpretation in studies combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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TEL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**795**	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**111**	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
TEL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**212**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
TEL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**311**	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**313**	Educational Technology in the K-12 Curriculum	Applies and integrates educational technologies in all curricular areas; examines theoretical and practical issues for diverse learners. Fee.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**314**	Classroom Assessment	Assessment and evaluation of student leaning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**315**	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L or SB	
TEL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
TEL	**492**	Honors Directed Study		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**493**	Honors Thesis		Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
THA	**101**	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
THA	**102**	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:THA 101 with a grade of C or better
THA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**201**	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 102 with C or better
THA	**202**	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 201 with a grade of C or better or currently enrolled
THA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THE	**307**	Acting:		N	LEC	N	CNV	Herberger College of the Arts	School of Theatre and Film	3.		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	**125**	Orientation to Theatre and Film	Orientation to university and school resources and procedures. Career planning and guidance. Community-building exercises. Attendance and written response to performance and media events. Required for BA Theatre and BA Film (film and media production concentration) majors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Theatre and Film students only
THE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**220**	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	L or HU	Pre-requisites: Herberger Institute students in specific majors; THE 125 with B- or better; ENG 101, ENG 105 or ENG 107 with C or better
THE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**301**	Film: the Creative Process II	Advanced study of contemporary cinema history and film techniques; analyzes social changes in film, multicultural filmmaking, and the star system.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed FMP201or THE300 with a D or greater or be currently enrolled
THE	**320**	History of the Theatre I	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites:Must have completed THE220 with a C or greater or be currently enrolled
THE	**321**	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must have completed THE220 and THE320 with a C or greater or be currently enrolled
THE	**322**	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must NOT be a Theatre student
THE	**325**	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Must be a Theatre student
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**403**	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**404**	Foreign Films and Filmmakers	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	G	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**405**	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors. May be repeated for credit when topics vary. Fee (hybrid/Internet).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**406**	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & C	Prerequistes: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**421**	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Pre-requisites:ENG 102(or Eng 105, or 108) with a grade of D or better, or currently enrolled
THE	**422**	Latina and Latino Theatre	Readings, discussion, video of dramatic literature and production styles of Latina and Latino playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with a C or greater or currently enrolled OR Theatre Masters students
THE	**423**	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prequisites: Must be a Masters student , or must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled
THE	**424**	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**426**	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prequisites: Must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled OR be a Masters Theatre student
THE	**430**	History of Costume: Western Tradition	Studies major costume styles throughout history of Western civilization and how these fashions reflected society. Explores how styles can be used by theatrical costumers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**440**	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre undergraduate student; THE 220 and THE 320 with C or better
THE	**480**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Junior standing and above. Students who have credit for THE 581, may not enroll in THE 480

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		Pre-requisites: Must be a Fine Arts student; Must be an Honors student
THE	**493**	Honors Thesis		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be a Fine Arts student ; Must be an Honors student
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**504**	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**505**	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**510**	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**520**	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**524**	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**525**	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THE524 with a B or better
THE	**562**	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THP560 with a B or better
THE	**581**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis. Credit is allowed for only THE 581 or 480.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be a graduate student. Students who have credit for THE 480, may not enroll in THE 581
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Graduate student
THE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art Theatre student
THE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
THE	**201**	Film:Creat Procss I	Elements of the theatrical film: cinematography, sound, editing, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**320-W**	History of the Theatre	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**321**	History of Theatre	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**420**	History of the American Theatre	History of the plays, artists, and events in the development of American theatre from colonial to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
THE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**101**	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must NOT be a Theatre student
THP	**102**	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student
THP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**201**	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THP	**202**	Acting II: Realism	Rehearsal techniques and application of action to dramatic text. Emphasizes realistic drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Completed THP101 or THP102 with a B or better; Completed THE 220 with a C or better or be co-enrolled in THE 220
THP	**213**	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**214**	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**218**	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Fine Arts Theatre student; THE 220 AND THP 102 with a C or greater .
THP	**251**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**260**	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed ENG101,105 OR 107 with a C or greater or be currently enrolled
THP	**261**	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 101, 105 or 107 with C or better
THP	**272**	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**277**	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**301**	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**302**	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 101 (or THP 102), THP 202, THP 272, THP 277 and THE 220 with C or better
THP	**307**	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites:Must have completed THP101 or THP102 with a C or greater or be currently enrolled.
THP	**311**	Improvisation with Youth	Basic materials, techniques, and theories for facilitating improvisational drama with children and youth. Not open to freshmen.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman student
THP	**312**	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman or Sophomore student
THP	**313**	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**317**	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student; Corequisite: THP301
THP	**318**	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP218 AND THP213 or THP214 with a C or greater or be currently enrolled
THP	**320**	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**322**	Acting: Voice-Overs and Radio Drama	Applies effective vocal techniques to commercials, books on tape, radio dramas. Preparation of audition tape, performance in radio drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**331**	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP214 with a C or greater or be currently enrolled.

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THP	**340**	Scene Design	Studio projects in designing scenery for contemporary stages. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP 213 with a grade of C or greater and THE 220 with a grade of C or greater or be currently enrolled.
THP	**345**	Lighting Design	Principles and theory of stage lighting design, including design process and execution, equipment, and light plots. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Sophomore standing or above
THP	**350**	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a BA Theatre major OR a Fine Arts BFA student
THP	**360**	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:Must have completed ENG210 or THP260 with a C or better, or be co-enrolled in THP 260
THP	**361**	Intermediate Screenwriting	Character and dialogue development, choosing correct structure, importance of subplots, developing a story into a completed thirty-page screenplay.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 261 with D or better or currently enrolled
THP	**372**	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP272 with a B or greater or be currently enrolled; must be junior academic level or higher
THP	**377**	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**378**	Acting: Stage Dialects	Major dialects needed for actors; techniques for researching and learning dialects; phonetic analysis of dialects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP377 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**385**	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled
THP	**386**	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP 101 or THP 102 with a B or greater or be currently enrolled
THP	**387**	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP101 or THP102 with a B or greater or be currently enrolled OR must be a Film and Media Production student.
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**401**	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites: THP 301 with a C or better, or Master of Arts or Master of Fine Arts student
THP	**406**	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 completed with a C or better
THP	**411**	Methods of Teaching Drama	Applies materials, techniques, and theories with grades K-8 youth. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Graduate student OR must have completed THP311 with a C or greater or be currently enrolled
THP	**418**	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 318 with a C or greater or be currently enrolled OR Herberger Master of Art or Master of Fine Arts students
THP	**428**	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	**430**	Costume Design	Principles of costume design with projects in both modern and period styles. Includes budgets and fabric/pattern estimates.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must be a Theatre Scenography or Performance Design student OR must have completed THP214 with a C or greater or be currently enrolled
THP	**431**	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP214 AND THP331with a C or greater or be currently enrolled in both OR must be a Theatre Scenography or Performance Design student
THP	**435**	Advanced Technical Theatre	Selection of materials, drafting of working drawings, tool operation, and construction techniques.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 AND THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**440**	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**441**	Scene Painting	Studio projects in painting stage scenery. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**442**	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**444**	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP213 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**445**	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student AND have completed THP444 with a B or greater or be currently enrolled
THP	**450**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**451**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:THP 450 with a grade of D or better, or co-enrolled

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THP	**460**	Advanced Playwriting	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage, culminating in a full-length script.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Fine Arts BFA student; Must have completed THP360 with a C or greater or be currently enrolled
THP	**461**	Scripts in Progress	Studio work with the instructor, centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP460 with a C or greater or be currently enrolled
THP	**481**	Secondary School Play Production	Methods of directing, designing, and coordinating play production experiences at the secondary school level.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**482**	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prerequisite:Must be a sophmore academic level or higher
THP	**483**	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP 202 with C or better or currently enrolled; Junior academic level or higher OR Master of Fine Arts student
THP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites:Must be a Theatre or Film student
THP	**489**	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP 101 or THP 102 and THE 220 with a B or greater; Junior academic level or higher
THP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
THP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		Prerequisites: Must be a Theatre student
THP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**501**	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**502**	Graduate Acting	Understanding and analyzing scripts and performance in order to be an effective actor/storyteller who speaks as a character. Projects focus on solo, duet performances. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**503**	Performance: the Ensemble	Ensemble, working with a playwright, creates a play that addresses social issues through improvisation and community input.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Masters of Art or a Masters of Fine Art Theatre student
THP	**504**	Acting: Styles	Fundamentals including combat, scansion, poetic language, acting style. Scene study, ensemble performance projects focused on Shakespeare, new scripts. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Pre-requisites: THP 503 with a D or better
THP	**505**	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisites: Master of Fine Art Theatre student
THP	**506**	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	**507**	Acting: Advanced Research and Performance	Acting in advanced theatre projects, productions, or collaborative performance in directing classes.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**509**	Singing for Actors	Introduces the basics of singing technique. Breath control, resonance, articulation, exploration, and expansion of singing range.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**511**	Methods of Teaching Drama	Applies dramatic materials, techniques, and theories with grades K-8 youth. Regular participation with children. Credit is allowed for only THP 511 or 411.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**512**	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Graduate student
THP	**514**	Projects in Community-Based Drama	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**518**	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**519**	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**520**	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student

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THP	**521**	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**522**	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**523**	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**524**	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**525**	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**526**	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**527**	Design II: Conceptualization and Collaboration	Readings and research in stage management and participation as a stage manager in a university theatre production	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**528**	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**529**	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**530**	Advanced Costume Design	Advanced studio projects in costume design for a variety of production forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Arts Theatre student
THP	**540**	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	**545**	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts Theatre student
THP	**550**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		MFA Theatre student
THP	**555**	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**556**	Performance Technology		N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**557**	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
THP	**560**	Playwright's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art Theatre student
THP	**561**	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**582**	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Fine Arts Theatre student
THP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Theatre Master student
THP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisites: Fine Arts Graduate student
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Fine Arts Graduate student
THP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student

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THP	**611**	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**618**	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**649**	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
TMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**331**	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre- or Co-requisites: TMC 346; ABS 350, APM 301, QBA 221, STP 420 or OMT 401
TMC	**346**	Management Dynamics	Management challenges and the leadership skills needed to achieve organizational objectives in the changing industrial and technical environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**396**	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Prerequisites:Must be at least a Junior AND be a Tech Sci BAS or BS student.
TMC	**470**	Project Management	Introduces techniques for managing small groups within larger organizations, including team building, motivating, planning, tracking activities, and computer tools.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Technology & Innovation BAS student OR IMC 346, IST 346, MGT 301 or TMC 346 with D or better and APM 301 or STP 420 with D or better. If you have credit for OMT 570, you may not enroll in TMC 470.
TMC	**480**	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		Prerequisites:Must be a Tech Sci/Engr: NonDegree or BAS or BS or MS or MS Tech Plan AND have a 2.25 GPA or better.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		Prerequisites: Must be a Tech Sci: BAS or BS AND have 3.00 GPA or better.
TMC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre Requisites: Graduate or Non Degree Students Only
TMC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TWC	**200**	Impact of Communications Technology on Society	Organizational issues and development of technical communication. Activities include research, evaluations, and presentation of oral arguments in support of positions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Must have earned C or better in ENG 102, 105, or 108 or be currently enrolled
TWC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**301**	General Principles of Multimedia Writing	Introduces writing in a variety of media, understanding the consequences of integrating media, and effective editing techniques.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**347**	Written Communication for Managers	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**400**	Technical Communications	Planning and preparing technical publications and oral presentations based on directed library research related to current technical topics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: College of Technology and Innovation BS or BSE student; senior academic level; 2.25 minimum cumulative GPA; ENG 102, 105 or 108 with C or better
TWC	**401**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 501, you may not enroll in TWC 401
TWC	**403**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**411**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Students who have credit for TWC 511, may not enroll for TWC 411
TWC	**421**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: If you have credit for TWC 521, you may not enroll in TWC 421
TWC	**431**	Principles of Technical Editing	Basic principles of technical editing (for print and electronic media) including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:May not enroll in TWC 431, if credit received in TWC 531
TWC	**443**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:If you have taken TWC 543, you may not enroll in TWC 443
TWC	**444**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 544, you may not enroll in TWC 444
TWC	**445**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you received credit for TWC 545, you may not enroll in TWC 445
TWC	**446**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 546, you may not enroll in TWC 446

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TWC	**451**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment. Credit is allowed for only TWC 451 or 551.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 551, you may not enroll in TWC 451
TWC	**452**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for TWC 552, may not enroll in TWC 452
TWC	**453**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 453 or 553.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit in TWC 553, you may not enroll in TWC 453
TWC	**454**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 454 or 554.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	C	Pre-requisites: If you have credit for TWC 554, you may not enroll in TWC 454
TWC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**490**	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**492**	Honors Directed Study		N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-6		
TWC	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
TWC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
TWC	**501**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 501 who have credit in TWC 401
TWC	**503**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**511**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 511 who have credit in TWC 411
TWC	**521**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 521 who have credit in TWC 421
TWC	**531**	Principles of Technical Editing	Basic principles of technical editing for print and electronic media, including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 531 who have credit in TWC 431
TWC	**543**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 543 who have credit in TWC 443
TWC	**544**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 544 who have credit in TWC 444
TWC	**545**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 545 who have credit in TWC 445
TWC	**546**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 546 who have credit in TWC 446
TWC	**547**	Business Reports	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**551**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment. Credit is allowed for only TWC 551 or 451.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 551 who have credit in TWC 451
TWC	**552**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues. Credit is allowed for only TWC 552 or 452.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 552 who have credit in TWC 452
TWC	**553**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 553 or 453.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 553 who have credit in TWC 453
TWC	**554**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 554 or 454.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		

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TWC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
UET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**305**	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: Academic Level greater than or equal to Junior
UET	**331**	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: CHM 113, PHY 112, and EST 210 OR BAS Electronic & Energy Systems student
UET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**411**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 411 or 511.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisites: UET 331 and UET 417; Students with credit for UET 511, may not enroll in UET 411
UET	**415**	Electronic Manufacturing Engineering Principles	Electronic equipment design and fabrication principles and practice. Completion of electronics hardware design project and report.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2-3		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**416**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 416 or 516.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or co-requisites: UET 417; Credit for UET 516 or UET 416 only
UET	**417**	Semiconductor Technology Practice	Lab-based design and execution of safe and effective semiconductor fabrication operations.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: UET 331
UET	**418**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 418 or 518.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 518, may not enroll in UET 418
UET	**421**	IC Device Characterization	Design and operation of the major classes of semiconductor devices. Characterization by parameters and their extraction. Future technology trends.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Have received a C or greater in UET331 or be currently enrolled AND be a Tech Sci: BAS or BS or MS or MS Tech or Grad Non Degree
UET	**424**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisite: UET 417; Credit not allowed for UET 424 and UET 524
UET	**426**	Software Tools for the Semiconductor Industry	Introduces software tools commonly used in the semiconductor industry, such as SUPREM IV, PSPICE, VIEWLOGIC, and ICED.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
UET	**432**	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 532 may not enroll in UET 432.
UET	**437**	Process Control and Validation	Statistical process control and its application to IC fabrication. Design, control, and performance validation techniques throughout the manufacturing process. Lecture with Web support. Prerequisite: 300-level statistics course.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisite: UET 417 with C or better or Co-enrolled in UET 417
UET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
UET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
UET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
UET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**511**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 511 or 411. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for UET 411, may not enroll in UET 511
UET	**516**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 516 or 416.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Graduate status. Credit for UET 416 or 516
UET	**518**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 518 or 418.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 518 and UET 418.
UET	**521**	Device Physics	Band structure of solids, electron hole-pairs, mobility, lifetime, fermilevel, pn junctions, diodes, and bipolar and MOS transistors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**524**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 524 and UET 424
UET	**532**	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is not allowed for both UET 432 and UET 532.
UET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Grad or Non Degree Grad student AND have a 3.0 GPA or better OR be a Senior AND a Tech Sci student AND have a 3.0 GPA or better.
UET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UNI	**100**	Academic Success at the University	Orientation to campus resources, study skills, and other academic and social issues for college students. Introduces an understanding of human diversity, values, and perspectives as they relate to student success.	N	LEC	N	OPT	University College	Dean, University College	3.		
UNI	**101**	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UNI	**150**	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	DIS	N	OPT	University College	Dean, University College	1.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	**250**	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	DIS	Y	OPT	University College	Dean, University College	1.		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**110**	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	University Academic Success Programs	3.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	University Academic Success Programs	1-4		
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	University Academic Success Programs	1-4		
UPH	**510**	Health Policy and Management	Provides (1) an overview of the U.S. healthcare delivery system and the policies that have shaped it and (2) a foundation in organizational theory and design concepts to support improved system performance. Identifies the dynamics of an organization in terms of its power and political structures, applies creative problem-solving methods, and effectively implements change. Emphasizes the interpersonal and leadership skills required to be effective advocates for public health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
URB	**100**	Introduction to Urban and Metropolitan Studies	Introduction to study of urban governance. Explores city, civil society, and urban form from different cultures and historical periods. Credit is allowed for only URB 100 or 300.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**105**	Introduction to Urban Governance	Introduces American city growth from past to present. Examines the background of major urban issues emphasizing governance, management, and policy. Credit is allowed for only URB 105 or 305.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**220**	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**240**	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**300**	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts. Credit is allowed for only URB 300 or 100.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**301**	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**302**	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**305**	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas. Credit is allowed for only URB 305 or 105.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**400**	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**405**	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 with C or better; URB 240 with C or better

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URB	**406**	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 or URB 240 with C or better
URB	**410**	Urban Leadership and Collaborative Skills	Emphasizes the changing roles of leadership and collaboration in a complex, diverse, and dynamic urban environment.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
URB	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
URB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
USL	**210**	Service Learning: Independent Placement	Provides community experiences and reflection opportunities that examine community needs, the importance of civic engagement, and the effects of social injustice on our society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals. See http://servicelearning.asu.edu for more details.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
USL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
USL	**402**	Service Learning:Tutoring Community Children	Tutoring and mentoring K-8 children attending under-resourced schools in an after-school or summer program. Design and implement fun learning activities focused on reading, writing, math, and other academic subjects. Process and learn from experience through reflective writing assignments. Fulfills community service hours required by some programs and scholarships. Honors credit available via contract. No exams. No experience with children required--training is provided.Any ASU students of any major and any level (freshman-senior and grad students) may enroll. Hours listed include 30-minutes travel time to/from internship site. Transportation from the Tempe campus is available. See http://servicelearning.asu.edu/internships for more details. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
USL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
USL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
VTN	**101**	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
VTN	**102**	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisties:VTN 101 with C or better
VTN	**201**	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 102 with a grade of C or better or currently enrolled
VTN	**202**	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 201 with a grade of C or better or currently enrolled
VTN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**321**	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 202 with a grade of D or better, or currently enrolled
VTN	**322**	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 321 with D or better
VTN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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VTN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**107**	Introduction to Academic Writing for International Students	For students from non-English-speaking countries. Combines classroom and supplemental instruction with intensive reading, writing, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: TOEFL score of 0-559, ACT score of 0-18, SAT score of 0-460 or Accuplacer score of 0-4 (if test taken prior to May 12, 2009, then score 0-7)
WAC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WPC	**101**	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**301**	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	**302**	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Pre-requisites: Must be an Honors student
WPC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WST	**318**	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	INACTIVE Women and Gender Studies Program	3.	HU & G	Pre-requisites: AFH 200, WST 100, or WST 300 with D or better. Students who have credit for AFH 318, may not enroll in WST 318
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**313**	Women and Sexuality	Explores feminist theories about women's sexuality and the relationship of these theories and related research to women's experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**360**	Women as Healers	Examines the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for AFH 364, may not enroll in WST 364
WST	**365**	Women and International Health	Advanced study in the field of international health by illustrating the realities of women's lives outside of the industrialized world. Examines these issues using vivid ethnographic materials that present the scope of everyday life for women in other countries, as well as the tragic consequences of poverty, gender discrimination, and inadequate health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with a C or better, or a minimum or 30 credit hours
WST	**371**	Sex and the City: Women, Sexuality, and Popular Culture	Examines the changing construction of young, sexually autonomous women in the city by popular media in post-WWII America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: WST 100 or WST 300 with D or better
WST	**372**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**375**	Women and Social Change	Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**377**	History of American Feminist Thought	Explores the development of American feminist theory from its roots to 1975.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	H & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**378**	Global Feminist Theory	Global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C & G	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**382**	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites:WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	
WST	**413**	Lesbian, Gay, and Gender Studies	Explores lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from sociological, psychological, historical, and literary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
WST	**421**	Girlhood and Adolescence	Examines the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**440**	Politics of Women's Health	Interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites:May not sign up for WST 447 if received credit for SGS 454, or TCL 447
WST	**460**	Women and the Body	Interdisciplinary look at how representations of women's bodies permeate culture and affect a woman's sense of self.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**464**	Voices and Visions	Explores the contributions of visionary women in the humanities; topics vary from semester to semester.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**470**	Gender and Popular Culture	Interdisciplinary examination of how gender is constructed in popular cultural forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**477**	Women and Violence	Global examination of forms of violence against women at the individual, institutional, and cultural levels, and efforts to control it.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Students who have credit for PUP 547 may not enroll in WST 547
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**601**	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: degree-seeking graduate students only
WST	**602**	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**603**	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**640**	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**701**	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only

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WST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
WST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**220**	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
WST	**276**	Feminist Foundations: Going to the Sources	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**333**	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**370**	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**376**	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**390**	Women and Religions	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**430**	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**444**	Gender, Health, and Bodies	Exploresgender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	Pre-requisites: WST 100 or WST 300 with C or better
WST	**457**	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**467**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	**473**	Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**475**	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
WST	**480**	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better

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WST	**483**	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**485**	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled; ENG 101 or 105 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
WST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not sign up for WST 100, who have received a D or better in WST 300
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
YDL	**201**	Introduction to Youth Studies	Introduces a perspective on the everyday lives of youth in regard to experience, sex, age, relational context, and identity.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**210**	Urban Youth and Youth Studies	Explores the lives of young people from 12 to 22 years old in urban neighborhoods, communities, and cities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**301**	Adolescent and Youth Development Leadership	Applies theory and research about youth, including how findings can be used and how theories facilitate behavior understanding.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**450**	Youth Policy	Examines various federal and state policies designed for youth, how and why policies for youth are constructed.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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AAD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
AAD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
AAD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
AAD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
AAD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design MS student
AAD	**552**	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	**555**	Architect as Developer	Development building, real estate, construction funding, land acquisition, and the sources for capital.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AAD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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AAD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ABS	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
ABS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**207**	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 182 (or BIO 187)
ABS	**225**	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101 or CHM 113
ABS	**226**	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-Requisite: ABS 225
ABS	**260**	Fundamentals of Urban Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	Pre-requisite: BIO 100 or BIO 182 (BIO 187)
ABS	**270**	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**274**	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: BIO 182 (or BIO 187)
ABS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**301**	Technology and Biology	Demonstrations of a broad range of innovative technologies in molecular biology, cellular and organismal biology, horticulture, and wildlife and restoration ecology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**302**	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**311**	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or 188) ; BIO 182 (or 187) with C or better
ABS	**312**	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: BIO 182 (or BIO 187)
ABS	**314**	Applied Plant Physiology	Understanding control of plant growth and developmental processes through innovated technologies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 or BIO 182
ABS	**350**	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	
ABS	**355**	Anatomy and Physiology of Vertebrates	Evolution, Classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology ,specializations and conservation status of the vertebrates.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 182 (or BIO187) , and BIO 181 (or BIO188)
ABS	**360**	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**362**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: ABS 260
ABS	**363**	Landscape and Turf Irrigation	Design, management, and maintenance of landscape and turf irrigation systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: ABS 260
ABS	**364**	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 260
ABS	**368**	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181
ABS	**370**	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: BIO 181
ABS	**376**	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	**378**	Wildlife Nutrition	Principles of nutrient metabolism in wildlife species; emphasizes understanding the interaction of wildlife with their environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 and CHM 101 (or CHM 113)
ABS	**380**	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 207 or ABS 260
ABS	**381**	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**401**	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**402**	Vegetation and Wildlife Measurement	Vegetation inventory, sampling, monitoring, and evaluation. Methods of estimating wildlife populations, activity, and home ranges.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 207; ABS 350 (or STP 420)
ABS	**425**	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**430**	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 225
ABS	**433**	Riparian and Wetland Ecology	Functions and components of riparian and wetland ecosystems and the management of these systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		prerequisites: ABS 370
ABS	**434**	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 225, 226, 370
ABS	**435**	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 370, ABS 350 (or STP 420)
ABS	**440**	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 370 and ABS 380
ABS	**441**	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre/Co-requisite: ABS 440
ABS	**460**	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		
ABS	**462**	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisite: ABS 260
ABS	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 260
ABS	**465**	Senior Enterprise Project	Selection and completion of an urban horticulture project with faculty advisor approval related to the field of study.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		Pre-requisite: Senior standing
ABS	**470**	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
ABS	**471**	Ornithology	Classification and biology of birds, emphasizing North America.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 355
ABS	**475**	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: ABS 376; ABS 380
ABS	**476**	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Pre- or co-requisite: ABS 402
ABS	**480**	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	Pre-requisite: Senior standing
ABS	**481**	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 433
ABS	**482**	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ABS 225; ABS 372; ABS 440
ABS	**483**	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	2.		Pre-requisite: ABS 482
ABS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		
ABS	**485**	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisite: ABS 350, STP 420, or EGR 280

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ABS	**486**	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		
ABS	**489**	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		Pre-requisite: Junior or Senior standing
ABS	**490**	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisite: Senior standing
ABS	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6		
ABS	**493**	Honors Thesis		N	THE	N	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-6	L	Pre-requisites: Must be an Honors student
ABS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ABS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-7		
ABS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ABS	**540**	Plant Responses to Environmental Stresses	Reaction of plants to environmental stresses: aerial pollutants, fire, herbivores, floods, mechanical treatments, pesticides, and soil amendments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**550**	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**551**	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**553**	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**560**	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**570**	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**586**	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ABS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ACC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**231**	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Not open to Pre-BIS or Interdisciplinary Studies students; CIS 105, 220 or 236 with C or better
ACC	**232**	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: WPC Accountancy and Finance majors, and other majors with School of Accountancy approval; CIS 105, 220 or 236 with C or better
ACC	**241**	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: ACC 231, ACC 261 or ACC 303 with C or better
ACC	**242**	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**261**	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	**271**	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**315**	Financial Accounting and Reporting	Accounting theory and practice related to uses of financial statements by external decision makers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 231 and ACC 241 with C or better
ACC	**316**	Mgmt Uses of Accounting	Uses of accounting information for managerial decision making, budgeting, and control.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey BS or BA student (not open to Accountancy students); or non-bus student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and 56 earned hrs; ACC 241 with C or better
ACC	**326**	External Financial Reporting I	Theory, U.S. standards, and practice applicable to financial statements, revenue recognition, and assets.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**327**	External Financial Reporting II	Theory, U.S. standards, and practice applicable to equities, cash flow statement, earnings per share, leases, pensions, and other essential topics.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: School of Global Management and Leadership Accountancy student; ACC 326 with C or better
ACC	**336**	Cost Management and Control	Concepts and principles for product costing, planning and control, and internal decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-Requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate
ACC	**340**	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with a grade of C or better. Pre- or co-requisite: FIN 300 or FIN 302 or FIN 303.
ACC	**350**	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better
ACC	**356**	Income Tax Accounting	Public policy concepts and rules of federal income tax for all taxpayers. Individual tax returns and use of tax software.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 with C or better
ACC	**361**	Accounting Technology	Use and understanding of a computerized accounting package and other software for accounting applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Managment Accountancy BS student with Professional status OR be pursuing an Accountancy or Prof Accountancy certificate AND ACC 326 and 336 and 346 with C or better
ACC	**382**	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student

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ACC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	**430**	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 340 and LES 305 with C or better
ACC	**440**	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	**444**	Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 with a grade of C or better.
ACC	**450**	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 and 444 with C or better
ACC	**476**	External Auditing	Theory and standards underlying the attestation process. Topics include evidence gathering, analysis, reporting, and development of professional judgement skills.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisites: Global Management Accountancy BS student OR Accountancy or Professional Accountancy Certificate; ACC 322 or 327 with C or better; ACC 346 or 347 with C or better
ACC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		
ACC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**493**	Honors Thesis		N	THE	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Pre-requisites: Must be an Honors student
ACC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		
ACC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Pre-requisite: Accountancy BS, Finance BS or Economics BS student
ACC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	**502**	Financial Accounting	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**503**	Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	2-4		Pre-requisite: MBA student
ACC	**511**	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**512**	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Master of Accounting student
ACC	**513**	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Specific Business Graduate majors
ACC	**561**	Auditing Through the Computer	Presents general IT audit concepts, terms, standards, practices, and current tools and techniques.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**571**	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**573**	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**575**	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**582**	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**585**	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Business Graduate student
ACC	**586**	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors

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ACC	**588**	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	**589**	Multijursidictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: W. P. Carey Master of Taxation student
ACC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**596**	Accounting and Leadership Capstone Project	Case-based course dealing with the pragmatics of managing risk in a variety of business settings, including public accounting, consulting, and industry.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3.		Pre-requisite: Graduate student in Accountancy & Applied Leadership
ACC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student

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ACC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ACO	**100**	Overview of Applied Computing	Internet and HTML, XML, databases, networks and distributed processing, digital media and graphic design. Opportunities, professionalism, and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	
ACO	**101**	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: MAT117 or higher with C or better
ACO	**102**	Principles of Computer Science	Issues and concepts throughout computer science, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Java programming.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 101 with C or better
ACO	**201**	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	**210**	Introduction to Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisite: ACO 201 with C or better
ACO	**220**	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-reqiusites: ACO 201 and MAT 243 with C or better
ACO	**320**	Database Systems and Transaction Processing	Relational database normalization theory, stored procedures, triggers, and call-level interface. Data-centric XML. Transaction processing in centralized and distributed databases. Security.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 220 with C or better
ACO	**330**	Computer Networks	Network architecture and protocols, flow and congestion control, switching and routing, link-layer technologies, medium access control, physical layer basics, quality-of-service, security.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 102 with C or better
ACO	**331**	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 330 with C or better
ACO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**420**	Object Databases	Object-oriented conceptual modeling, object-oriented databases, object-relational databases, applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**421**	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**422**	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: ACO 320 with C or better
ACO	**430**	Wireless Networks	Wireless transmission fundamentals, multiple access techniques, error detection and control, cellular concepts and systems, wireless LAN, performance analysis, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and STP 300 with C or better
ACO	**431**	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210, ACO 330 and MAT 243 with C or better
ACO	**432**	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ACO 210 and ACO 330 with C or better
ACO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		

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ACO	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
ACO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
ACO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
ACO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
ADE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ADE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**321**	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Architecture student; ALA 240 with C or better
ADE	**322**	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must have completed ADE 321 with a grade of C or better or be currently enrolled; must be an Architectural Studies student
ADE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**421**	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451, ARP 484
ADE	**422**	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must be an Architectural Studies student; Must have completed ADE 421 with a grade of C or greater or be currently enrolled; Must have completed ARP 484 with a grade of Y or be currently enrolled
ADE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ADE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ADE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ADE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ADE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ADE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

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ADE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	**510**	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**511**	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 510 with a grade of C or greater or be currently enrolled
ADE	**512**	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	6.		Pre-requisites: Must be Master of Architecture student; must have completed ADE 511 with a grade of C or greater or be currently enrolled
ADE	**521**	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	**522**	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**621**	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**622**	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	**661**	Bioclimatic Design Studio	Sustainable architectural and site synthesis at a variety of scales emphasizing bioclimatic criteria and the use of passive and low-energy systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Must either be Master of Architecture or Bldg Des(Energy Perform/Bldgs) MS student

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ADE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ADE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEC	**10-D**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**10-M**	Tutorial--Mon/Wed		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-D**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**11-M**	Tutorial--Tues/Thurs		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**21-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-D**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**23-M**	Special Elective		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**30**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-D**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**31-M**	International T.A.		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**41-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**42**	Basic 1 Grammar		N	LEC	N	GNA	EE - CONV	Arizona State University	0.		
AEC	**50-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**50-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**51-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**60-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**61-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate Toefl		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**63**	Intermediate TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**64**	Business Across Cultures		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**70-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**71-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**72-D**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		

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AEC	**72-M**	Intermediate 2 Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**75**	Pronunciation		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-D**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**76-M**	Conversational English		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**78**	Internet		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**80-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**81-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-D**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**82-M**	Advanced Grammar		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**83**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-D**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**83-M**	Advanced TOEFL		N	LEC	N	OPT	EE - CONV	Arizona State University	6.		
AEC	**84**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-D**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**84-M**	Business Case Studies		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**90-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**91-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-D**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**98-M**	Listening/Speaking		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-D**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**99-M**	Reading/Writing		N	LEC	N	OPT	EE - CONV	Arizona State University	0.		
AEC	**20**	Listening/Speaking		N	LEC	N	GNA	University College	NC American English and Culture Program	3-9		
AEC	**20-D**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**20-M**	Listening/Speaking		N	LEC	N	AUD	University College	NC American English and Culture Program	0.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**22**	Special Programs Training		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**24**	Special Programs Field-Based Learning		N	LEC	N	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**25**	Special Programs English for Specific Purposes		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		

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AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**26**	Special Programs Project Work		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**27**	Special Programs Current Issues and Topics		Y	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**28**	Special Programs Survival English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**32**	Evening English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**33**	Evening English ST: Language Test Preparation		Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**34**	Evening English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**35**	Weekend English ST: Business English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**36**	Weekend English ST: Academic English		N	LEC	Y	GNA	University College	NC American English and Culture Program	3-9		
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**37**	Weekend English ST: Professional English		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**38**	Weekend English ST: Language Test Preparation		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**39**	Weekend English ST: English Skills		N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**40**	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

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AEC	**41**	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**42**	Basic 1 Grammar	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**50**	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**51**	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**52**	Basic 2 Grammar	Learn grammar for everyday writing and speaking ¿ present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**53**	Basic Communication Special Topic	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**60**	Intermediate 1 Listening/Speaking	On completing the Intermediate 1 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		

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AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**61**	Intermediate 1 Reading/Writing	On completing the Intermediate 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**62**	Intermediate 1 Grammar	Improve grammar for everyday writing and conversation ¿ present perfect and present perfect continuous and future tenses, noun clauses, and grammar to cover frequency, duration, possibility, and necessity.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**70**	Intermediate 2 Listening/Speaking	On completing the Intermediate 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**71**	Intermediate 2 Reading/Writing	On completing the Intermediate 2 Reading/Writing course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**72**	Intermediate 2 Grammar	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**73**	Intermediate Communication Special Topic	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**75**	Intermediate Pronunciation/Accent Reduction		N	LEC	N	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**77**	Intermediate TOEFL	Introduces test-taking strategies for the iBT TOEFL. Only Intermediate-level students may attend this class.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		

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AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**80**	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**81**	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**90**	Advanced 2 Listening/Speaking	On completing the Advanced 2 Listening/Speaking course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**91**	Advanced 2 Reading/Writing	On completing the Advanced 2 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	9.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**92**	Advanced Grammar	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**93**	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		

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AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**94**	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**95**	American Culture Studies Special Topic	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**96**	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	3.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**97**	Advanced TOEFL	Improve test-taking strategies for specific areas of the iBT (Internet-Based test) TOEFL and the Institutional (paper and pencil) TOEFL. This is an elective course that meets six hours per week. This course also includes FREE Institutional TOEFL Test while this form of the TOEFL is still available.	Y	LEC	Y	GNA	University College	NC American English and Culture Program	6.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X98**	ESL Credit Course Special Topic	These courses are introductions to the university environment and to volunteerism in the community. A student will have opportunities to interact and to be exposed various aspects of American culture. These AECP elective courses can also be taken for 3 ASU credits which may be applied to a degree program.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEC	**X99**	International Teaching Assistants Training	The ITA training Seminar is a no-fee course offered to international students who are candidates for a teaching assistantship. The seminar is a non-credit semester long course which addresses language improvement, teaching skills, and cross-cultural training.	N	LEC	Y	OPT	University College	NC American English and Culture Program	3.		
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Public Affairs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Public Programs	School of Public Affairs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Applied Ethics & the Professions MA Student; Students who have credit for PHI 501, or REL 581, may not enroll in AEP 501
AEP	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: AEP 501 or Applied Ethics & the Professions MA Student . Students with credit in PHI 502 or REL 582, may not enroll in AEP 502
AEP	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AEP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AES	**101**	Air Force Today I	Introduces U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**102**	Leadership Lab	Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**103**	Air Force Today II	Continuation of AES 101. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**104**	Leadership Lab	Continuation of AES 102 with more in-depth emphasis on learning the environment of an Air Force officer.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	**201**	The Evolution of USAF Air and Space Power I	Further preparation of the AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, quality Air Force, and values.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**202**	Leadership Lab	Application of advanced drill and ceremonies, issuing commands, knowing flag etiquette, and developing, directing, and evaluating skills to lead others.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**203**	The Evolution of USAF Air and Space Power II	Continuation of AES 201. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2.		
AES	**204**	Leadership Lab	Continuation of AES 202 with emphasis on preparation for field training.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	**301**	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**302**	Leadership Lab	Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**303**	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**304**	Leadership Lab	Continuation of AES 302 with emphasis on planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		

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AES	**401**	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.	L	
AES	**402**	Leadership Lab	Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**403**	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3.		
AES	**404**	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0.		
AES	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		
AES	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**191**	First-Year Seminar		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**210**	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: PHY 112; Pre/Co-requisite: MAT 266
AET	**215**	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
AET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**300**	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	**310**	Instrumentation	Measurement systems, components, system response, and the characteristics of experimental data. Methods of collecting and analyzing data.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MAT 266 or MAT 271; AET 210
AET	**312**	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 211 (or CON 221 or ETC 211 or ECE 210 or MAE 212); MAT 266 (or MAT 271)
AET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
AET	**415**	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 OR Technology and Innovation or Fulton Engineering Graduate student
AET	**417**	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or ECE 313); AET 312 (or ECE 312); AET 300
AET	**420**	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: AET 300; MET432
AET	**432**	Applied Heat Transfer	Heat transfer by conduction, convection, and radiation. Applies heat transfer to engineering design problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre- requisites: ETC 340 or MET 340 with D or better (or co-enrolled in ETC 340); may not enroll in AET 432 if credit received in AET 524
AET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Technology and Innovation BS student; Minimum cumulative GPA of 3.00; Minimum Junior standing
AET	**492**	Honors Directed Study		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6		
AET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
AET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00
AET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Manufacturing Engineering Technology students; Minimum cumulative GPA of 2.00

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AET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
AET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**524**	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 or MAE 340 with D or better; May not enroll in AET 524 if you have credit in AET 432
AET	**525**	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 434, AET 415 or MAE 340
AET	**560**	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Technology Innovation or Fulton Engineering students; Senior or higher academic level
AET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**300**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFH	**303**	African and African American Art	Anthropological perspective of African and African American visual art traditions from the past to 1970.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**305**	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H	Pre-requisites: AFS 200, HST 109 or 45 minimum hours; Credit is allowed for only AFH 305 or HST 326
AFH	**318**	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & G	Pre-requisites: AFS 200, WST 100, or WST 300 with D or better or minimum of 45 earned hours; Credit allowed only for WST 318 or AFH 318

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFH	**319**	Black Experience in Latin America	Examines several aspects of the experience of Africans in the Latin America diaspora; comparisons with United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**331**	Studies in African American Women Writers of Pre-Harlem Renaissance	Focuses on novels, short stories, essays, speeches, and dramas that gave voices to African American woman in pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**335**	Survey of African Literatures	Intersection of colonialism, race, class, gender, nationalism, postcoloniality, social transformation, and ethnicity in African writers' fiction and literary production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	
AFH	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
AFH	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for WST 364, may not enroll in AFH 364
AFH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	
AFH	**465**	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFH	**492**	Honors Directed Study		N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**191**	First Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**210**	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**317**	Genes, Race and Society	Examines history of biological and social constructions of race in western society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFR	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Students who have credit for TCL 335, may not enroll in AFR 335
AFR	**375**	Race, Gender and Sport	Interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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AFR	**428**	Critical Race Theory	Examines ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**460**	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	**490**	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFR	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
AFR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		
AFR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
AFR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**525**	Foundations of Caribbean Studies	Broad interdisciplinary understanding of the Caribbean that surveys the region's history, politics, economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**526**	Selected Topics in Caribbean Politics	In-depth understanding of the impact of selected topics on the political economy and social infrastructure of the Caribbean.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AFR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFS	**200**	Introduction to African and African Diaspora Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**202**	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	Credit is allowed for only ASB 202 or AFS 202

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AFS	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
AFS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**301**	Race and Racism in Africa/African Diaspora	Construction of race, racism, and race relations in Africa/African Diaspora; practices of agency to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	
AFS	**302**	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: AFS 200 (or WST 100 or 300) with D or better, or minimum 45 hours; Students who have credit for HST 335 or WST 302 may not enroll in AFS 302
AFS	**304**	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	Pre-requisites: AFS 200 with D or better, or 45 completed hours
AFS	**310**	African/African American Psychology	Historical and contemporary overview of the development of African/Black psychology and African American frame of reference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**312**	Contemporary African and African Diaspora Women	Explores recent literary, theoretical, and methodological themes concerning the study of African/African Diaspora women and the phenomena of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**320**	Africa: Politics, Environment, and Development	Uses African experience to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**327**	Human Rights in Africa	Comparative study of human rights focusing on colonial and post-colonial Africa from historical and contemporary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: ASB 222
AFS	**340**	The Making of Modern Africa	Events and processes leading to the colonization of Africa and subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**345**	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	Pre-requisites: AFS 200 with D or better or completed 45 hours
AFS	**355**	Democracy and Civil Society in Africa	Examines contending perspectives on the state and civil society and democratic struggles using sub-Saharan Africa and case study.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**360**	Black Families in the Diaspora: U.S. and Caribbean	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: AFS 200 or FAS 101 with D or better. Students who have credit for FAS 360 may not enroll in AFS 360
AFS	**363**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & H & C	
AFS	**364**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C & H	
AFS	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**370**	Family, Ethnic, and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
AFS	**372**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, REL 362, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or SGS 366

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AFS	**373**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
AFS	**380**	Health Issues in the African American Community	In-depth examination and discussion of African American health across the lifespan. Discusses the factors associated with disparities in health and healthcare.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better or 45 minimum hours
AFS	**385**	Popular Black Media and Adolescent Risk Behavior	In-depth examination of the existing research that supports and refutes the hypothesis that exposure to various media content influences subsequent behavior. Students complete a content analysis of risk behaviors in various forms of the adolescent media environment, including music, music videos, television shows, movies, the Internet and video games. Specific risk behaviors include violence and aggression, drug use, and sexual risk activity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 or minimum 45 hours
AFS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**415**	Black Political Thought and the Limits of Liberal Democracy	Critical examination of the ideas that have shaped politics in the Black World from the mid-nineteenth century onwards. These include ideas of resistance, liberation, nation and governance, emanating from Africa, the USA, the Caribbean and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
AFS	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G & H	
AFS	**480**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
AFS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AFS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**420**	Food Marketing	Food processing, packaging, distribution, market research, new food research and development, and social implications.	N	LEC	N	OPT	Morrison Sch of Agribusiness	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**100**	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**161**	Computer Applications for Agribusiness Industries	Uses and integrates word processing, spreadsheets, and databases as tools for managing an agribusiness firm.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**271**	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		

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AGB	**302**	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	G	Pre-requisite: ECN 212 or ECN 214 with grade of C or better. Credit is allowed for only BUA 394 (Perspectives in Global Business) or MGT 302
AGB	**321**	Agribusiness Marketing II	Examines the food marketing system with emphasis on the marketing institutions, arrangements, and methods for basic commodities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**333**	Agribusiness Finance II	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**340**	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**360**	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	
AGB	**366**	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**367**	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**372**	Introduction to Veterinary Practice Management Module I	Initial offering of a three-module program that is an overview of the operation of a veterinary practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**374**	Veterinary Practice Management Module III: Finance and Marketing	Final course of a three-module program covering financial and marketing issues faced by veterinary practice managers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**410**	Agribusiness Management II	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**411**	Agricultural Cooperatives	Organization, operation, and management of agricultural cooperatives.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**414**	Agribusiness Analysis	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	L	Pre-requisites: Agribusiness student; Minimum 87 hours; FIN 300 or FIN 302 or FIN 303, MGT 300 or MGT 303, MKT 300 or MKT 302 or MKT 303 with C or better. Credit is allowed for only BUA 440 or BUA 441 with C or better
AGB	**422**	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300
AGB	**424**	Agribusiness Sales	Principles and techniques of selling and merchandising in the agricultural and food industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**425**	Agricultural Marketing Channels	Operational stages of agricultural commodities in normal distribution systems and implementation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**429**	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	**431**	Intermediate Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**433**	Intermediate Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**434**	Agricultural Risk Management and Insurance	Strategies to manage agricultural price and business risk: derivatives, insurance, self-insurance, and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**435**	Agricultural Commodities	Trading on futures markets. Emphasis on the hedging practices with grains and meats. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: FIN 300 with a C or better.
AGB	**440**	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**442**	Food and Industrial Microbiology	Food- and industrial-related microorganisms; deterioration and preservation of industrial commodities. Lecture, lab.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
AGB	**445**	Food Retailing	Food retail management. Discusses trends, problems, and functions of food retail managers within various retail institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: MKT 300 with C or better.
AGB	**451**	Management Science	Focuses on the construction, solution, and interpretation of quantitative models used for management decision making in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.	CS	Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
AGB	**452**	International Agricultural Policy	Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**454**	International Trade	International practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisite: FIN 300 with C or better

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AGB	**465**	Organic Farming Technologies	Organic farming methods, including certification, soil fertility, planting, integrated pest management, irrigation, cover crops, rotations, and marketing farm products.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**470**	Comparative Nutrition	Effects of nutrition on animal systems and metabolic functions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**481**	Applied Microeconomics	Emphasizes application of the theory of the firm, theory of exchange, and consumer theory.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
AGB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6		
AGB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AGB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
AGB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-7		
AGB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-3		
AGB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
AGB	**511**	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**514**	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**528**	Advanced Agribusiness Marketing	Theory and analysis of marketing farm commodities, risks, and the effect of future trading on cash prices.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**529**	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**532**	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**535**	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**552**	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**554**	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**560**	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**561**	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**570**	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**589**	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AGB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**701**	Advanced Agribusiness I	Advanced topics include demand analysis, empirical industrial organization, welfare economics, agricultural policy, international trade, and consumer behavior.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**702**	Advanced Agribusiness II	Topics include macromarketing, marketing research, futures and options markets, derivatives, risk management, financial innovation, and forecasting.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**703**	Agribusiness Research Methods	Survey course in current research methods in economics, marketing, finance, and management as applied to agribusiness topics. May be repeated for credit.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AGB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AIS	**180**	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**280**	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	
AIS	**285**	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	H & C	

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AIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**370**	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisite: AIS 180 with C or better
AIS	**380**	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	
AIS	**381**	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**420**	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3.	L	Pre-requisite: AIS 180 with C or better
AIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7		
AIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALA	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H & G	
ALA	**102**	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**121**	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student
ALA	**122**	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 121 with a C or better; Co-requisite: ALA 124
ALA	**124**	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 122
ALA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALA	**200**	Introduction to Architecture	Surveys issues and polemics affecting current architectural theory and practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
ALA	**225**	Design Fundamentals III	Applies design fundamentals with an emphasis on architectural and landscape architectural issues.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with a C or better; Passed milestone; Co-requisite: ALA 227 and ALA 235;
ALA	**226**	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	4.		Pre-requisites: ALA 225 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ALA	**227**	Design Fundamentals III Lecture	History and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Architecture or Landscape Architecture student; Co-requisite: ALA 225 and ALA 235
ALA	**235**	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisites: Architecture or Landscape Architecture student; Co-requisites: ALA 225 and ALA 227
ALA	**240**	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ALA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ALD	**101**	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	
ALD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**202**	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**203**	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	**204**	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**301**	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1.		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**404**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**420**	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	**431**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531or FAS 421
ALD	**440**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**460**	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Pre-requisites: Must be an Honors student
ALD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ALD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**505**	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**520**	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	**525**	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**531**	Caregiving Issues for Familes and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	**535**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**540**	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**545**	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisite: Graduate students only
ALD	**560**	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ALD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**360**	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
ALT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**401**	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; Credit is allowed for only ALT 401 or 501
ALT	**405**	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	**410**	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: UET 331
ALT	**420**	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: CHM 113; ALT 360
ALT	**435**	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; ALT 410 (not required for BAS students); Credit is allowed for only ALT 435 or 535
ALT	**445**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: ALT 360; Credit is allowed for only ALT 445 or 545
ALT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
ALT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
ALT	**501**	Advanced Renewable Energy: Global Hydrogen Economy	Global, comprehensive evaluation of all renewable energy sources with focus on solar cells, hydrogen, and fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Students who have credit for ALT 401, may not enroll in ALT 501
ALT	**502**	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**503**	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**505**	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Credit is allowed for only ALT 405 or 505
ALT	**506**	Fuel Cell Integration and Packaging	Practical overview of integration and packaging of fuel cell system, which comprises a fuel processor module, a fuel cell module.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**507**	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**515**	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ALT	**535**	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit in ALT 435, may not enroll in ALT 535
ALT	**545**	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is allowed for only ALT 445 or 545
ALT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		

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AME	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Pre-requisites: Must be an Honors student
AME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7		
AME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**590**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**100**	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
AML	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	**330**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit is allowed for only ASB 430, CPI 430, or AML 330
AML	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**406**	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Completed at least two from the following: MAT 270, 271, 272; AND STP 226 (or 231 or 420)
AML	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**493**	Honors Thesis		Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	**497**	Honors Colloquium		Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
AML	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
AML	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**610**	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**611**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**612**	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AML	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**301**	Introduction to American Studies	Introduces the interdisciplinary study of American culture, emphasizing critical reading and writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	
AMS	**310**	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**311**	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**314**	U.S. Military in Context	Topics in the history and contemporary politics of the U.S. military, including its role in global/transnational affairs.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 45 hours
AMS	**316**	American Religious Systems	Topics in American religion; may include Hispanic missions of the Southwest. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**320**	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
AMS	**321**	American Cultural History II	Second of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
AMS	**322**	Studies in American Literature	Topics in American literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**323**	Studies in American Art and Architecture	Topics in the visual arts and material culture. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**326**	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**327**	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**330**	Documenting American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: Minimum 45 hours
AMS	**332**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**334**	The American Class System	Studies in social classes and their function within American society. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**335**	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 45 hours
AMS	**342**	Writing about American Culture	Teaches methods of writing cultural criticism, emphasizing the essay form.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**344**	Creative Writing	Emphasizes the study and practice of creative nonfiction. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**345**	Reporting	Fundamentals of news gathering, interviewing, and in-depth reporting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	**346**	Editing	Theory and practice of editing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**351**	Technical Writing	Computer-based instruction in writing documents for online, oral, and print formats, focusing on audience-centered rhetoric.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**412**	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**414**	Military Studies	Topics in the history of the American military. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**417**	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**422**	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**428**	Chicano Cultures in the Southwest	Examines and explores Chicana and Chicano culture as place and sentiment. The physical place and space and the sentiment related to Chicanas and Chicanos.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
AMS	**429**	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**431**	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**432**	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
AMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
AMS	**490**	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
AMS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
AMS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
AMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
AMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
AMS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**100**	Flight Operations and Safety I	Supervised private pilot flight training and flight safety briefings and recurrent aviation subjects appropriate for private pilots. Requires continuous enrollment until completion of FAA Private Pilot Certificate. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisite: Aeronautical Management Technology (Professional Flight) student; Pre/Co-requisites: AMT 182 and AMT 220 with C or better if completed

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AMT	**101**	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**182**	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**200**	Flight Operations and Safety II	Supervised commercial instrument flight training, safety briefings, and recurrent aviation subjects as appropriate for commercial and instrument pilots. Requires continuous enrollment until completion of FAA Commercial Pilot Certificate with Instrument Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Aeronautical Management Technology (Professional Flight) student ; AMT 100 with C or better
AMT	**201**	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) OR Aero Mgmt Tech (AWS Mgmt) OR Air Traffic Management student
AMT	**214**	Commercial/Instrument Ground School I	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT182, AMT220 and AMT101 with C or better
AMT	**220**	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
AMT	**280**	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned a D or better in PHY 111, and PHY 113
AMT	**287**	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	4.		Prerequiste: Must have earned D or greater or currently enrolled in PHY 111 or PHY 121 OR Corequisite: PHY111 or PHY121
AMT	**300**	Flight Operations and Safety III	Supervised instructor flight training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of FAA Flight Instructor Certificate with Instrument Instructor Rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Aeronautical Management Technology (Professional Flight) student; AMT 200 with C or better
AMT	**308**	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisite: Total earned hours must be greater than or equal to 50
AMT	**322**	Commercial/Instrument Ground School II	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater or currently enrolled in AMT100, AMT182 and AMT214
AMT	**330**	Managing Financial Resources in Aviation	Focuses on financial resource management techniques utilized by U.S. domestic air carriers and covers the unique aspects of revenue accounting and its application to airline operations. Concepts covered include: data capture of requisite information from various airline computer systems; determination of revenues generated from sales of airline products and services to customers; in-depth analysis of airline operational expenses; preparation of airline-specific accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting to U.S. governmental agencies; development/analysis of financial reports; and interline billing. Emphasizes accounting, planning, and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: AMT 308 with C or better
AMT	**350**	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements. fee	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: AMT 280 with C or better; Pre/Co-requisite: AMT 287 with C or better if completed
AMT	**382**	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must be Aero Mngt Tech (Prof Flight) student AND earned a C or greater in AMT200 or AMT322 or be currently enrolled
AMT	**385**	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: AMT 100; AMT 322; Co-Requisite: AMT 200

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	**387**	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Aeronautical Management Technology (Professional Flight) student; AMT 200 with C or better
AMT	**391**	Multiengine Instructor Ground School	Ground school preparation for the FAA Multiengine Flight Instructor Rating. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisite: Technology Science BS student
AMT	**392**	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Technology and Innovation BS student; AMT 200 and AMT 385 with C or better
AMT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
AMT	**396**	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisite: Technology Science BS or BAS student; Minimum 50 hours
AMT	**400**	Flight Operations and Safety IV	Multiengine and crew training, safety briefings, and appropriate recurrent aviation subjects. Requires continuous enrollment until completion of multiengine rating. Flight instruction costs are not included in university tuition and fees. Fee.	N	LEL	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		Pre-requisites: Aeronautical Management Technology (Professional Flight) student; AMT 300 with C or better
AMT	**401**	Multiengine Instructor Rating	Normal and emergency flight operations. Instruction techniques and procedures for light multiengine land, airplane. CFIAME Rating required for course completion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
AMT	**408**	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequiste: Must have a C or greater in AMT 308 or be currently enrolled
AMT	**410**	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: AMT 182 with C or better; AMT 308 with C or better
AMT	**442**	Aviation Law/Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Total earned hours must be greater than or equal to 50
AMT	**444**	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum Junior standing
AMT	**482**	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Aero Mngt Tech (Prof Flight) student; AMT200 or 322 with a C or better; AMT 382 with a C or better.
AMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
AMT	**486**	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT300, AMT382 and AMT 482 with C or better
AMT	**488**	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Aero Mngt Tech (Prof Flight) student; AMT 300, AMT 382 and AMT 482 with C or better
AMT	**489**	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic level must equal Junior or greater AND must have a C or greater in AMT 308 or be currently enrolled
AMT	**490**	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Aero Mngt Tech (Prof Flight) student; AMT 300, 400, 382, 482, 486 and 488 with C or better
AMT	**491**	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Academic Level greater than or equal to Senior
AMT	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
AMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Prerequisite: University Cumulative GPA is greater than or equal to 2.25
AMT	**496**	Airline Aircraft Systems Capstone	Commercial airline aircraft systems and flight procedures. Includes theoretical education for large, commercial passenger aircraft.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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AMT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
AMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
AMT	**520**	Airline Pricing and Yield Management	Airline economics at the operating level; historical and current operational strategies; demand, traffic, price, yield, revenues, and costs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**521**	Air Transportation Regulation	Reviews evolutionary history of government regulations. Explores alternatives for economic, safety, social, and administrative regulatory reform in air transportation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**522**	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**523**	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**524**	Airport Management and Operations	Overview of planning, funding, and development of airport facilities; legal and ethical considerations associated with airport management operations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**525**	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton School of Engineering with a University Cum GPA 3.0 or greater
AMT	**526**	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**527**	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**528**	International Aviation	Major issues of international aviation, historical review of institutional framework. Bilateral route agreements, freedom versus sovereignty, current legal and political arrangements.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**529**	Fixed-Base Operations Management	Examines FBO role in the national aviation system. Organization of flight line operations, aircraft maintenance, and administration for multiple aircraft types.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**532**	Managing Diversity in Aviation	Examines group identity and cognitive styles, cross-cultural issues, language and diversity, and effects of aviation culture on management of diversity.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**541**	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**542**	Human Factors in Automation	Examines human factors issues associated with automation. Includes impact of automation design, workload, stress, and system complexity on human operators.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**545**	Human Factors in Aviation	Overview of human role in aviation. Issues, problems of unsafe acts and attitudes in human behavior. Human engineering capabilities and limitations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**546**	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**549**	Applied Human Factors Research	Aviation human factors research principles applied and tested in operational settings. Group projects assigned in conjunction with industry partners.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Senior in Coll of Engr & Applied Science with a University Cum GPA 3.0 or greater
AMT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student

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AMT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AMT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
AMT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) OR Coll of Engr & Applied Science student
ANB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ANB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**601**	Research Strategies in Animal Behavior	Using hands-on experiences, teaches key concepts underlying the control and function of animal behaviors and contemporary methods for measuring, analyzing, and reporting animal behaviors. Combines introductory classroom lectures on concepts and methods with direct application in observations and experiments on animal behavior in the field and the lab. Topics include communication, mating behavior and systems, parental care, kin selection, cooperation and competition, migration and dispersal, foraging, and anti-predator strategies.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: Animal Behavior PhD student
ANB	**602**	Current Issues In Animal Behavior	Student-led seminar course centers on discussions of contemporary literature in the field of animal behavior.Takes a student-driven approach, with course participants selecting a target theme for the semester, selecting individual papers to discuss each week, and leading discussions about relevant merits and shortcomings of each article. Additional topics may include: conceptual frameworks and results from the dissertation projects of participating students, career options and strategies in the behavioral sciences, responsible research conduct in the field, and tactics in manuscript publication and grantsmanship.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Animal Behavior PhD student
ANB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ANB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**475**	Computer Programming in Architecture	Computer programming for architectural problems and applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
ANP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ANP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ANP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
ANP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ANP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ANP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ANP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ANP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student

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ANP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ANP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	**681**	Project Development	Defines and elaborates on major ideas for implementation in ADE 622 in relation to contemporary theory and practice.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ANP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**200**	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
APA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**315**	Asian Pacific American Literature	Explores the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**330**	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**340**	Asian Pacific Americans and Media	Analyzes social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
APA	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C & H	
APA	**360**	Asian Pacific American Experience	Historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(HU or SB) & C	
APA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	**450**	Asian Pacific American Contemporary Issues	Focus on issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	
APA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
APA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
APA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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APA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**212**	Culture of Place	Explores contemporary conditions in the built environment as they are shaped by cultural phenomena.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**300**	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	**305**	Contemporary Architecture	Europe and America from the foundations of the modern movement to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Non-majors only (non-architecture students)
APH	**313**	History of Architecture I	Surveys the monuments, buildings, and cities of Europe and Africa from the earliest human settlements to the present day.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisite: Juniors and Seniors only
APH	**314**	History of Architecture II	Surveys the monuments, buildings, and cities of Asia and the Americas from the earliest human settlements to the present day.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & G & H	Pre-requisites: APH 313 with a C or better
APH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
APH	**414**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for PUP 412 or APH 414 only
APH	**421**	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L or HU	Pre-requisites: Architecture student; APH 313 and APH 314 with C or better
APH	**441**	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
APH	**446**	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**447**	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
APH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
APH	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
APH	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
APH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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APH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
APH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
APH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APH	**505**	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	**509**	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	**511**	Energy Environment Theory	Solar and other energy sources in designed and natural environments; architectural, urban, and regional implications of strategies using other renewable resources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Architecture, Master of Urban Design or Building Design MS student
APH	**515**	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**581**	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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APH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
APL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**588**	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**601**	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**501**	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**502**	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**503**	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzela Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p-spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**504**	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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APM	**505**	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**506**	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations. Students should be an APM graduate student.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**520**	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**521**	Numerical Analysis for Ordinary Differential Equations	Stability, accuracy, consistency, RK methods, finite differences, linear partial differential equations, dispersion, dissipation, method of lines. Applications and programming. Students should have had a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**522**	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**523**	Optimization	Linear programming, unconstrained nonlinear minimization, line search algorithms, conjugate gradients, quasi-Newton methods, constrained nonlinear optimization, gradient projection, and penalty methods. Completion of courses in Applied Linear Algebra and Computational Methods is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**524**	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**525**	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**526**	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**530**	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**531**	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**532**	Mathematical Neuroscience II	Mathematical modeling of systems neuroscience. Network dynamics, coupled phase oscillators, central pattern generators, neural coding, learning and memory. Students should have taken ordinary differential equations or mathematical cell physiology or mathematical neuroscience prior to enrolling in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**533**	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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APM	**534**	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**535**	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**541**	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**553**	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**560**	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**561**	Nonlinear Analysis of PDEs in Fluids	Sobolev spaces; incompressible Euler and Navier-Stokes equations; weak and strong solutions; attractors and the connection with turbulence; geophysical applications. Completion of a course in Differential Equations II is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**570**	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**575**	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	**576**	Theory of Partial Differential Equations	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**577**	Theory of Partial Differential Equations	Continuation of APM 576. Completion of a course in the Theory of Partial Differential Equations is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**581**	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**582**	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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APM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
APM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AR	**461**	Adv Ceramics I		Y	LEC	Y	CNV	Herberger College of the Arts	School of Art	3.		
ARA	**110**	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1.		
ARA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**195**	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARA	**202**	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**311**	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Non-ART student; ENG 101; ENG 102; Minimum Junior standing
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	**488**	Understanding Art	Understanding art as an emergent cultural phenomenon with an emphasis on a critical examination of conceptual issues in art. Writing required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L or HU	Pre-requisites: ARS 101; ARS 102
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**460**	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
ARA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARB	**101**	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**102**	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ARB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**201**	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**202**	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ARB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**311**	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**321**	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**331**	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**335**	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
ARB	**341**	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**351**	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**411**	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ARB	**421**	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
ARB	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ARB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ARB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	**250**	Teaching Inquiry in Art	Uses inquiry and literacy processes to teach young people through adults to make and understand art.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**301**	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARE	**370**	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with C or better
ARE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**440**	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art majors: ARE 250 with C or better, or Herberger Institute majors not in the School of Art with junior standing
ARE	**482**	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Fine Arts Art student
ARE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	**486**	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 482 with C or better
ARE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARE	**493**	Honors Thesis		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	**496**	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ARE 250 with B- or better
ARE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	**510**	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**520**	Issues in Teaching Inquiry in Art	Issues in teaching and learning through inquiry about artworks using print and electronic reproductions and information.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARE	**525**	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**530**	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**535**	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**540**	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**610**	Issues and Trends in Art Education	Doctoral-level investigation of historical and contemporary issues related to teaching and research in art education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**611**	Curriculum Development in Art Education	Doctoral-level inquiry into the philosophical, psychological, and sociological foundations of curriculum development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**451**	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
ARP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ARP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
ARP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ARP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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ARP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ARP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Architecture student
ARS	**100**	Introduction to Art	Understanding of art and its relationship to everyday life through painting, sculpture, architecture, and design. No credit for Art majors or non-Art majors who have completed ARS 101 or 102 or 300.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 101, 102, or ARS 300 may not enroll in ARS 100
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	
ARS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**201**	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**202**	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	
ARS	**250**	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**300**	Introduction to Art	Course content same as ARS 100 but requires a higher level of accomplishment and comprehension. No credit for Art majors or non-Art majors who have completed ARS 100. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: Students who have credit for ARS 100 may not enroll in ARS 300
ARS	**302**	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	**310**	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**340**	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**362**	Pre-Columbian Art I	Architecture, sculpture, ceramics, painting, and other arts of Mesoamerica before European contact. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**400**	History of Printmaking	History of the print as an art form and its relation to other modes and forms of artistic expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**402**	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**404**	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 with C or better; Minimum Junior standing; Credit is allowed for only ARS 404 or 504
ARS	**406**	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**410**	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**412**	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**414**	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better; Students who have credit for ARS 514, may not enroll in ARS 414
ARS	**416**	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**417**	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 417 or 517
ARS	**418**	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**422**	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**424**	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	**426**	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**428**	Art of the 18th Century	History of painting, sculpture, architecture, graphic arts, and the decorative arts from 1700 to the French Revolution (1789).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 428 or 528
ARS	**430**	Art of Spain and its Colonies	Architecture, painting, and sculpture from 1500 to 1800. Colonial focus on central Mexico and the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 430 or 530
ARS	**432**	19th-Century French Art and Culture	History of painting, graphic arts, sculpture, and architecture, 1800 to 1900 in France in its political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better
ARS	**434**	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 534, may not enroll in ARS 434
ARS	**435**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ARS	**436**	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**437**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ARS	**438**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisite: ARS 102 with C or better
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better
ARS	**442**	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	
ARS	**451**	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ARS	**458**	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**459**	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 458
ARS	**460**	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ARS 439
ARS	**465**	Native North American Art	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites: 45 completed hours; 2.00 GPA or better
ARS	**466**	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	
ARS	**468**	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & C & H	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better
ARS	**469**	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art hIstory requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU & H	Pre-requisites: ARS 101; ARS 102

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	**472**	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102
ARS	**473**	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101 and ARS 102 with C or better; Minimum 55 hours; Credit is allowed for only ARS 473 or 574
ARS	**475**	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 475 or 575
ARS	**480**	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	**485**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.	L	Pre-requisites:ARS 101, & ARS 102 with a grade of D or better. Students who have credit for ARS 585, may not enroll in ARS 485
ARS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6		
ARS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Pre-requisites: Must be an Honors student
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	**501**	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**502**	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101 with C or better
ARS	**504**	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504
ARS	**506**	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**514**	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or Post Bacc Undergraduate or a Graduate Student; Students who have credit for ARS 414, may not enroll in ARS 514
ARS	**516**	Critical Approaches to Gothic Art	Architecture, sculpture, painting, and the minor arts in western Europe, ca. 1150-1350, considered within religious, social, and economic contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**517**	Critical Approaches to Late Gothic Art	Art of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts. Requires research or reading project.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 417 or 517
ARS	**522**	Sixteenth-Century Italian Art	Critical study of painting, sculpture, and architecture in 16th-century Italy in its religious and historical context.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**528**	Eighteenth-Century Art in Europe	Critical study of European art from the late Baroque to the early years of Neoclassicism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 428 or 528
ARS	**530**	Art of Spain and New Spain	Critical study of architecture, painting, and sculpture from 1500 to 1800.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 430 or 530
ARS	**532**	Art, Politics, and Patronage, 1770-1850	Critical analyses of political events in Europe. Examines issues of patronage, art as propaganda. Impact of war and revolution on visual arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**534**	Studies in Modern European Art, 1850-1914	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours must be greater than or equal to 108; Must be a Senior or a Post Bacc Undergraduate or be a Graduate Student. Students who have credit for ARS 434, may not enroll in ARS 534
ARS	**542**	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student

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ARS	**562**	Art of Ancient Mesoamerica	Critical study of art and architecture of Mexico and Maya areas before Spanish contact.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**565**	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Total Earned Hours Must Be Greater Than or Equal to 108; Must be a Senior or a Post Bacc Undergraduate OR be a Graduate Student
ARS	**574**	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate Student; ARS 101, ARS 102 with C or better; Students who have credit for ARS 473 may not enroll in ARS 574
ARS	**575**	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ARS 475 or 575
ARS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**585**	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Students who have credit for ARS 485, may not enroll in ARS 585
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ARS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**101**	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**102**	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**438-W**	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
ARS	**439**	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
ARS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ARS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ARS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ARS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ARS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ARS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**453**	Experimental Printmaking	Alternative techniques and methods to traditional approaches to printmaking. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger College of the Arts	School of Art	3.		
ART	**111**	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**112**	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**113**	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**115**	3-D Design	Fundamentals of 3-D form. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**201**	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Co-requisite: ART 202
ART	**202**	Photography I Lab	Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0.		Co-requisite: ART 201
ART	**204**	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art undergraduate student; ART 201 with C or better

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ART	**205**	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 201 and ART 202 with C or better
ART	**211**	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**214**	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. Lab. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 112 with C or better
ART	**223**	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**227**	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 113 with C or better
ART	**231**	Sculpture I	Explores sculptural forms through concepts related to basic materials. Focus on studio production, safety, aesthetic criticism, and history of sculpture. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 111 and ART 115 with C or better
ART	**253**	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites:Art undergraduate student; ART 113 with C or better
ART	**261**	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; ART 112 and ART 115 with C or better
ART	**272**	Metalworking I: Introduction	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming. Not open to seniors. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**274**	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**276**	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, feltmaking, dyeing, block printing, plaiting, 3-D structures. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art undergraduate student; Maximum Junior standing; ART 112 and ART 115 with C or better
ART	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**301**	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art major with completed portfolio; ART 204 with C or better
ART	**304**	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**307**	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student; ART204 and (ART101 or ART201) with C or better
ART	**308**	Digital Photographic Images I	Scanning, manipulation, refinement, and compositing of photographic images on the computer. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; Completed portfolio milestone (if required); ART 204 and (ART 101 or ART 201) with C or better
ART	**311**	Drawing III	Emphasizes composition, exploration of drawing media. 6 hours a week. Requires acceptance into the appropriate professional program or instructor approval. Contact your academic advisor in the School of Art for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 with C or better
ART	**314**	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student or completion of portfolio milestone; ART 214 with C or better
ART	**323**	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio; ART 223 with C or better
ART	**325**	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 214 and ART 323 with C or better
ART	**327**	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 227 with C or better
ART	**331**	Sculpture II	Continuation of ART 231 with an emphasis on metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student with portfolio completed; ART 231 with C or better
ART	**332**	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: ART 331 with C or better
ART	**333**	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 332 with C or better
ART	**345**	Visualization and Prototyping	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: Digital Art OR Intermedia student
ART	**346**	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.	CS	Prerequistes: Must be an ART student
ART	**348**	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student; ART 346 with C or better

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ART	**351**	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. Studio 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): ART 253 with C or better
ART	**352**	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**354**	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student; Completed two from ART 111, 112, 113 with D or better
ART	**355**	Printmaking as Photography	Introduces photographic principles and skills for photomechanical printmaking processes, including photosilkscreen, photolitho, and photoetching. 6 hours a week. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 with C or better
ART	**360**	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application. 6 hours a week. May be repeated once for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 with C or better
ART	**363**	Ceramic Clay-Glaze		N	LEC	N	CNV	Herberger Inst Design & Arts	School of Art	3.		
ART	**364**	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 with C or better
ART	**365**	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**372**	Metalworking II	Metal fabrication techniques including surface embellishment. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**373**	Metalworking III	Compression, die, and stretch forming as applied to hollow form construction. Hot and cold forging techniques as applied to smithing. 6 hours a week. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 with C or better
ART	**374**	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 with C or better
ART	**376**	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**377**	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 276 with C or better
ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**403**	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**404**	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 204 and (ART 101 or ART 201) with C or better
ART	**409**	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**410**	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**411**	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 211 and ART 311 with C or better
ART	**414**	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisite: ART 314
ART	**415**	Art Anatomy	Study of human anatomical structures as applied to the practice of figure-oriented art. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	4.		Prerequsites: Art student; ART 214 with C or better
ART	**423**	Painting III	May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223 and ART 323 with C or better
ART	**425**	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 223, ART 323 and ART 314 with C or better
ART	**427**	Advanced Watermedia	Continuation of ART 327. Advanced techniques, concepts, and methods with watercolor and other water-based media on paper. 6 hours a week. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**431**	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and 332 with C or better
ART	**432**	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**435**	Foundry Research Methods	Research in foundry techniques.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1-4		

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ART	**436**	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231, ART 331 and ART 332 with C or better
ART	**437**	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**438**	Experimental Systems in Sculpture	Simple electrical and mechanical systems that can be utilized in the context of studio art and installations. Requires active production of studio artworks. 6 hours a week. May be repeated for credit. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 231 with C or better
ART	**439**	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Must be an ART student
ART	**440**	New Media Concepts	Continued experiments with new media and interdisciplinary concerns in art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Corequisite(s): ART 441
ART	**441**	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1.		Pre-requisite: Art portfolio completed; Co-requiste ART 440
ART	**443**	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsite: Art student
ART	**449**	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346 and ART 348 with C or better
ART	**450**	Computer Animation and Audio	Integrates audio with 3-D animation for fine arts applications. Includes compositing and effects. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 346, ART 348 and ART 449 with C or better
ART	**451**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: ART 351 with C or better. Credit is allowed for only ART 451 or 551
ART	**452**	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 352 with C or better
ART	**454**	Advanced Screen Printing	Continuation of ART 354. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 354 with C or better
ART	**455**	Advanced Photo Processes for Printmaking	Continued study of photomechanical techniques and applications to printmaking or photographic processes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student or Completed the portfolio milestone; ART 253 and ART 355 with C or better
ART	**456**	Fine Printing and Bookmaking I	Letterpress printing and typography as fine art. Study of history, alphabets, mechanics of hand typesetting, presswork, and various forms of printed matter. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**457**	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 253 and ART 456 with C or better
ART	**458**	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: You must be an ART student AND you must have a C or greater in ART253
ART	**459**	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: ART student or Completed the portfolio milestone; ART 253 with C or better
ART	**460**	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequsites: Art student AND you must have a C or greater in ART261 AND ART360 AND ART364(or be currently enrolled in ART360 & ART364) AND
ART	**463**	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 261 and ART460 with C or better
ART	**466**	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	**472**	Metalworking IV	Forging, forming, and surface metalworking techniques with a focus on personal statements and craftmanship. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 372 with C or better
ART	**473**	Metalworking: Special Problems	Special problems in metalworking related to techniques and individual directions. 6 hours a week. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 272 and ART 373 with C or better
ART	**474**	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 274 and ART 374 with C or better
ART	**476**	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 376 with C or better
ART	**477**	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requsites: Art student; ART 276 and ART 377 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	**478**	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	**479**	3-D Fibers	Explores traditional and nontraditional 3-D fiber techniques and media. Discussion, research, and critiques augment technical demonstrations. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisite: Art student
ART	**492**	Honors Directed Study		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		
ART	**493**	Honors Thesis		N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequsites: You must be an Honors student
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Pre-requsite: Art student
ART	**530**	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**540**	Digital Motion Studies	Fine arts digital motion studies using computer animation and video. Studio. Fee. Prerequisite: ART 346 or instructor approval. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**551**	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours; Credit is allowed for only ART 451 or 551
ART	**582**	Art Research	Independent study research using classroom facilities and supplies.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ART	**621**	Studio Problems	Advanced study. 6 hours a week each section. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**682**	MFA Exhibition Research	MFA exhibition practicum using classroom facilities and supplies. Can be used in place of ART 680.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ART	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ART	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ART	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
ART	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requsite: Art student
ART	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ART	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AS	**150**	Animal Husbandry		Y	LEC	Y	CNV	Ira A. Fulton Engineering	W. P. Carey School of Business	3.		
ASB	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**101**	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
ASB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: Students who have credit for SSH 200, may not enroll in ASB 200. Must have ENG 101, 105, 107, or ENG 111.
ASB	**202**	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	Credit is allowed for only AFS 202 or ASB 202
ASB	**210**	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view across various cultures around the globe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**223**	Buried Civilizations of the Americas	Archaeology through examination of several ancient civilizations of Meso-, South, and North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**230**	Beginning Culture Theory	Bridges ASB 102 and upper-division courses; introduces cultural theory and fosters independent thinking, critical analysis, communication, and adaptability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

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ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G	
ASB	**252**	Anthropology of Sports	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASB	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better,. If you have credit in SSH 301 or HST 301, you may not enroll in ASB 301
ASB	**302**	Ethnographic Field Study in Mexico	Fieldwork study of cultural adaptation, Mexican culture, United States-Mexican cultural conflict, ethnographic research methods, and local culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**310**	Precolonial Africa	Surveys social, economic, political, cultural, and economic institutions and civilizations of Africa before European colonialism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**314**	Comparative Religion	Origins, elements, forms, and symbolism of religion; a comparative survey of religious beliefs and ceremonies; the place of religion in the total culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & H & C	
ASB	**322**	Peoples of Mesoamerica	Indigenous, mestizo, and national cultures, rural and urban peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**324**	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**325**	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	G	
ASB	**326**	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**327**	Action Anthropology	Explores contemporary issues and problem solving in Cuna, Micronesia, Mayan, and U.S. Latino communities, through applied anthropology and community initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**328**	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	**330**	Principles of Archaeology	Methods and theories for reconstructing and explaining the lifeways of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ASB 222 or ASB 223, with a grade of D or better
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H & C	
ASB	**337**	Pre-Hispanic Civilization of Middle America	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(HU or SB) & G & H	
ASB	**338**	Archaeology of North America	Origin, spread, and development of the prehistoric Indians of North America up to the historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	
ASB	**344**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	Pre- or corequisite: ASB 100 (or 101 or 102 or 222 or 223) or ASM 104 (or 246) or BIO 100 (or 181 or 182) or SSH 100; Students who have credit for SOC 353, may not enroll in ASB 353
ASB	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355

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ASB	**361**	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**362**	The Neolithic Revolution and its Consequences	Surveys models for the appearance of food production in the Old World, and its consequences for emergent social complexity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	H	
ASB	**366**	African Archaeology: Precolonial Urban Culture	Overview of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**368**	Prehistoric and Historic Hunter-Gatherers	Studies known hunting and gathering societies with the goal of developing approaches to understanding past hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB 370, SOC 370, SOS 370, or SSH 370
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**402**	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	
ASB	**412**	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**416**	Economic Anthropology	Economic behavior and the economy in preindustrial societies; description and classification of exchange systems; relations among production, exchange systems, and other societal subsystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L or SB	
ASB	**417**	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	Pre-requisites: AML 100 or MAT 142, 170, 210 265, or MAT 270 with C or better, or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; CPI 200 with C or better; Credit for only AML 330, CPI 430, or ASB 430
ASB	**443**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for SSH 403, you may not enroll in ASB 443
ASB	**452**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better, or currently enrolled. If you have credit for SSH 402, you may not sign up for ASB 452
ASB	**455**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**462**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
ASB	**463**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
ASB	**464**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for TCL 444,may not enroll in ASB 464
ASB	**466**	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G & H	
ASB	**471**	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	
ASB	**478**	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 102 or SOC 101 with C or better; 56 hours or more; Credit is allowed for only ASB 478, SOC 478 or TCL 478

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASB	**480**	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**481**	Language and Culture	Applies linguistic theories and findings to nonlinguistic aspects of culture; language change; psycholinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**483**	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	**485**	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASB	**489**	Doing Research in Anthropology	Research process learned through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing Rotating topics. May be repeated for credit.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASB	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 hours; Credit is allowed for only ASB 490 or PUP 490
ASB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**501**	Applied Medical Anthropology	Overview of anthropology's applications in medicine and its adaptations to U.S. ethnic populations. Requires research project in medical setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**502**	Health of Ethnic Minorities	Prevalence of illness, risk factors, health ecology, and medical and indigenous treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**508**	Colonial Rule and the African Experience	Impact of European colonial rule on the shaping of African consciousness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**525**	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**529**	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**530**	Ecological Anthropology	Relations among the population dynamics, social organization, culture, and environment of human populations, with special emphasis on hunter-gatherers and extensive agriculturalists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**531**	Anthropology of Development	Theories of development and the human and environmental consequences of development, with particular emphasis on rural Southeast Asia.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**532**	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**533**	Sustainable Urban Dynamics.	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites:If fyou have received credit for SOS 532, you may not enroll in ASB 533. Graduate students only
ASB	**536**	Ethnohistory of Mesoamerica	Indigenous societies of southern Mexico and Guatemala at Spanish contact and their postconquest transformation. Emphasis on the Aztec Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**537**	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**540**	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	**541**	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**542**	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**544**	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**546**	Pleistocene Prehistory	Development of society and culture in the Old World during the Pleistocene epoch, emphasizing technological change through time and the relationship of people to their environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**547**	Issues in Old World Domestication Economies	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**549**	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**550**	Economic Archaeology	Prehistoric economies in hunter-gatherer, tribal, and complex societies. Covers subsistence strategies, craft production and specialization, and exchange.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**551**	Prehistoric Diet	Critical review of techniques for recovering dietary information and theoretical models concerned with explaining diet and nutrition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**555**	Complex Societies	Examines structural variations in hierarchically organized societies, along with origins, dynamics, and collapse.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**558**	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**559**	Archaeology and the Ideational Realm	Postprocessual and other views concerning relevance of mental phenomena for understanding sociocultural change. Various approaches to inferring prehistoric meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**560**	Archaeology of the Social Realm.	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**563**	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**567**	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**568**	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**570**	Immigration to the U.S.	Covers some of the major topics and issues in immigration studies with a focus on the United States. Uses both theoretical works dealing with the causes and consequences of international migration and ethnographic accounts of actual immigrant lives. Broadly interdisciplinary and incorporates perspectives from sociology, political science, economics, and other fields; emphasizes anthropological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**571**	Museum Principles	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**572**	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**573**	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**574**	Exhibition Planning and Design	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**575**	Computers and Museums	Basics of museum computer application; hardware and software; fundamentals of database management; issues of research, collections management, and administration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**576**	Museum Interpretation	Processes of planning, implementing, documenting, and evaluating educational programs in museums for varied audience--children, adults, and special interest groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**577**	Principles of Conservation	Preservation of museum objects: nature of materials, environmental controls, and causes of degradation; recognizing problems, damage, and solutions; proper care of objects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**579**	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(HU or SB) & G	
ASB	**311**	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	

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ASB	**319**	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
ASB	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
ASB	**340**	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic, and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**346**	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**350**	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
ASB	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
ASB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**440**	Women in the Global Factory	Examines the impact of Third World women's incorporation into the new global division of labor in the late 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**442**	Urban Anthropology	Issues in understanding urban culture and social space from interdisciplinary anthropological perspective. May involve fieldwork. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
ASB	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
ASB	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
ASB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
ASB	**493**	Honors Thesis	Honors Thesis	N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
ASB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
ASB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
ASB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ASB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASB	**102**	Introduction to Cultural and Social Anthropology	Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture. Social, political, and economic systems; religion, aesthetics, and language.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
ASB	**202**	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**211**	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**222**	Buried Cities and Lost Tribes	Archaeology through its most important discoveries: human origins, Pompeii, King Tut, the Holy Land, Southwest Indians, and methods of field archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
ASB	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
ASB	**321**	Indians of the Southwest	Cultures of the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	
ASB	**335**	Prehistory /Southwest	Anthropological understandings of major cultural processes and events in the prehistory of the American Southwest using evidence from archaeology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
ASB	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-4	(HU or SB) & G	
ASC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ASC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
ASC	**301**	Contextual Uses of Algebra in Technology	Uses algebra to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: Polytechnic BAS student
ASC	**302**	Contextual Uses of Geometry in Technology	Uses geometrical concepts to solve real-world technological problems using currently available computer software.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: Polytechnic BAS student
ASC	**303**	Contextual Uses of Trigonometry in Technology	Topics for close examination in selected dramatic and/or nondramatic works. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: College of Technology and Innovation BAS students
ASC	**315**	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: College of Technology and Innovation BAS students
ASC	**325**	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: Polytechnic BAS student
ASC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		Pre-requisites: Polytechnic BAS student
ASC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		Pre-requisites: Polytechnic BAS student
ASC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-12		Pre-requisites: Polytechnic BAS student
ASE	**549**	Stat Applicatns Engr		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Arizona State University	3.		
ASE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours

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ASE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
ASE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
ASE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**104**	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SB or SG	
ASM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	**246**	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**275**	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
ASM	**301**	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites:ASM 104 with a grade of D or better
ASM	**332**	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASB 222
ASM	**338**	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		
ASM	**341**	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104

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ASM	**342**	Evolution, Ecology, and Human Biological Variation	Evolutionary interpretations of biological variation in living human populations from the perspective of evolutionary cultural ecology; emphasizes anthropological genetics and adaptation, disease, economics, mating, violent conflict.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Prerequisites: 56 completed hours; ASM 104 with C or better
ASM	**344**	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	H	Pre-requisites:ASM 104 with a grade of D or better
ASM	**345**	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104, or BIO 100, or BIO 181 (or BIO 188), or BIO 182 (or BIO 187), with a D or better
ASM	**348**	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	
ASM	**365**	Laboratory Methods in Archaeology	Techniques of artifact analysis. Basic archaeological research techniques; methods of report writing. May be repeated for credit for total of 8 hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASM 104 with a D or better
ASM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 (or SSH 100) and ASM 104 with a D or better
ASM	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for SSH 414, or SOS 414, may not enroll in ASM 414; Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
ASM	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in SOS 424 or BIO 424, may not enroll in ASM 424
ASM	**435**	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
ASM	**443**	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisites: BIO 340 or ASM 301 with C or better; Credit is allowed for only ASM 546, BIO 446 or 546
ASM	**448**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with a grade of D or better
ASM	**450**	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 104
ASM	**452**	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	**454**	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
ASM	**455**	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	L	Pre-requisite: ASM 343
ASM	**456**	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 345
ASM	**459**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: ASM 341; ASM 275; Credit is allowed for only ASM 459 or 559
ASM	**460**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	**465**	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	CS	
ASM	**472**	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		

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ASM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Must be an Honors student
ASM	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Pre-requisites: Must be an Honors student
ASM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Pre-requisites: Must be an Honors student
ASM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6.		Pre-requisites: May earn credit for BIO 506, ASM 506 or MCB 506 only. Graduste student only.
ASM	**520**	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**525**	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**530**	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**543**	Primatology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); credit is allowed for only BIO 446, ASM 446, BIO 546 or ASM 546
ASM	**548**	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**552**	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 452 or ASM 552
ASM	**555**	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	**559**	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 459 or 559
ASM	**560**	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**565**	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**566**	Advanced Topics in Quantitative Archaeology	Archaeological issues associated with quantitative analysis, e.g., Bayesian and Monte Carlo approaches, simulation, diversity. May be repeated for credit.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ASM 565

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	**568**	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**573**	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**611**	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
AST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		

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AST	**321**	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
AST	**322**	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	Pre-requisites: MAT 270 (or MAT 265), PHY 150 (or PHY 121/122) with C or better
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**421**	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**422**	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
AST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	**492**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Pre-requisites: Must be an Honors student
AST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
AST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**521**	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**522**	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**523**	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**531**	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**532**	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**533**	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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AST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
AST	**111**	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**112**	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	
AST	**113**	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	**114**	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Fee. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre- or Co-requisites: AST 112 or AST 322 (with or better if completed)
AST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
AST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
AST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ASU	**101-HNR**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1.		Pre-requisite: Barrett Honors student
ASU	**101-CPP**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Public Programs	College of Public Programs	1.		Pre-requisite: College of Public Programs student
ASU	**101-CTI**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Tech & Innovation	Dean, College of Technology and Innovation	1.		Prerequisite(s): College of Technology and Innovation student
ASU	**101-CS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Cronkite School of Journalism and Mass Communication student
ASU	**101-HDA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		Pre-requisite: Herberger Institute of Design and the Arts student
ASU	**101-CHE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1.		Pre-requisite: Fulton School of Engineering student

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ASU	**101-CEE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-CSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-FSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-CON**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-EEE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-BME**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-IEE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-MSE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1.		Pre-requisite: Fulton School of Engineering student

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ASU	**101-MAE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisite: Fulton School of Engineering student
ASU	**101-LA**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1.		Pre-requisite: College of Liberal Arts & Sciences student
ASU	**101-TE**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Teacher Education and Leadership student
ASU	**101-NCIAS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: New College of Interdisciplinary Arts & Sciences student
ASU	**101-NU**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing & Healthcare Innovation students only
ASU	**101-SOS**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1.		Pre-requisite: School of Sustainability student
ASU	**101-UC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1.		Pre-requisite: University College student
ASU	**101-WPC**	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1.		Pre-requisite: W.P.Carey student

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ATC	**230**	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ATC	**331**	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	**332**	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	**333**	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	**431**	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: ATC 331 with C or better
ATC	**432**	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:completed ATC 332 with C or better
ATC	**433**	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:Completed ATC 333 with C or better
ATC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
ATC	**491**	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: ATC 331 and ATC 332
ATE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**361**	Building Structures I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisite: ADE 321
ATE	**362**	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 361 with C or better
ATE	**451**	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 421
ATE	**452**	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
ATE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
ATE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		

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ATE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
ATE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**521**	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**550**	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**553**	Building Systems III	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student; Co-requisite: ADE 521; ATE 563
ATE	**556**	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: ADE 522 and APH 505
ATE	**557**	Construction Documents	Production of architectural working drawings; legal status, organization, layout, site survey plans, sections, elevations, details, schedules, and coordination.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**560**	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**562**	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**563**	Building Structures III	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Architecture student
ATE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**582**	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ATE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ATE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
ATE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AVC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
AVC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**461**	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms. Credit is allowed for only BCH 461 or 361.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; Co-requisites: CHM 341 or CHM 346 (with C or better if completed)
BCH	**462**	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: BCH 461 with C or better
BCH	**463**	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 341 or CHM 346 with C or better
BCH	**464**	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre-requisites: BCH 467 with a grade of C or better; Pre-or-Co-requisite: BCH 463 (with a grade of C or better if completed)
BCH	**465**	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 462 with a C or better
BCH	**467**	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
BCH	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		
BCH	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student

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BCH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
BCH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
BCH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
BCH	**501**	Current Topics in Biochemistry		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**561**	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**568**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 353 (or LSC 353) with C or better; CHM 231 or CHM 234 or CHM 334 with C or better; Credit is allowed for only BCH 361 or 461 (or LSC 366)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	**361**	Principles of Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. Credit is allowed for only BCH 361 or 461.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CHM 231 with C or better OR Pre or Co-requisites: CHM 234 or CHM 334 (with C or better if completed)
BCH	**367**	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCS	**101**	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
BCS	**102**	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 101 with a grade of D or better, or currently enrolled
BCS	**201**	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 102 with a grade of D or better, or currently enrolled
BCS	**202**	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites:BCS 202 with a grade of D or better or currently enrolled

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BCS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	**495**	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
BDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**701**	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Graduate College	Graduate College	9.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**702**	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**721**	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**722**	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**751**	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Graduate College	Graduate College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BE	**333**	Issues in Teaching		Y	LEC	Y	CNV	Institute & Grad Sch Education	Dean, W.P. Carey School of Business	3.		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	

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BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SG	Pre-requisites: BIO 201 with C or better
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.		Pre-requisites: C or better: BIO 181 (or BIO 188 or MBB 245) and BIO 182 (or BIO 187 or MBB 247, or both PLB 200 and PLB 201)
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:BIO 181; BIO 182 with a C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: BIO 480 with C or better
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**189**	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
BIO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
BIO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SG	Pre-requisites: BIO 201 with C or better
BIO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**302**	Cancer and Heart Disease	Incidence and mortality statistics for cancer and heart disease; host and environmental risk factors; diagnosis, treatment and prevention strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisite:BIO 188 with a C or better
BIO	**310**	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**311**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:with a C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201). Students with credit for HPS 340, may not enroll in BIO 311
BIO	**312**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	

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BIO	**314**	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: BS Biology and Society Concentration majors; BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**315**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	**316**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	
BIO	**318**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
BIO	**319**	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**321**	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre/Co-requisites: BIO 320 with C or better if completed
BIO	**322**	Conservation Biology and Ecological Sustainability I	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: A grade of C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201)
BIO	**323**	Conservation Biology and Ecological Sustainability II	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**324**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	
BIO	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only GLG 325 or BIO 325
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**340**	General Genetics	Science of heredity and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: C or better: BIO 181 (or BIO 188 or MBB 245) and BIO 182 (or BIO 187 or MBB 247, or both PLB 200 and PLB 201)
BIO	**342**	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 340 (with C or better if completed)
BIO	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisite: MBB 247 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	**344**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; CHM 113 and CHM 116 with C or better
BIO	**346**	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**351**	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites:BIO 181; BIO 182 with a C or better
BIO	**352**	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**361**	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**386**	General Entomology	Form, activities, and classification of insects. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or better

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BIO	**390**	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**402**	Service Learning	Provides academic enrichment and mentoring to economically disadvantaged children; related to course work in biology; requires weekly reflective reading and writing.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	
BIO	**406**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 406 or PLB 432
BIO	**410**	Techniques in Wildlife Conservation Biology	Field and analytical techniques used to evaluate wildlife populations, their structure, viability, and environmental impacts. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320, BIO 322, and BIO 323 with C or better
BIO	**411**	Quantitative Conservation Biology	Principles of conservation science; demography and extinction risk; practical approaches to conserving small, declining, and exploited populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320, BIO 322 and BIO 323 with "C" or better
BIO	**412**	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	**414**	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisites: BIO 314 with C or better
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	**416**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
BIO	**417**	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 415 with C or better
BIO	**421**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: You may not enroll in BIO 421 if you have credit for BIO 521; must have BIO 320 with a grade of C or better
BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	**426**	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	**427**	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**428**	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 320 with C or better
BIO	**431**	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with a grade of C or better
BIO	**435**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite:BIO 331 with a grade of C or better
BIO	**436**	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 331 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit only for MBB 440 or BIO 440
BIO	**446**	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 340 or ASM 301 with C or better; Credit is allowed for only ASM 546, BIO 446 or 546
BIO	**450**	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 351 with C or better
BIO	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**455**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**456**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better

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BIO	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better. Credit is allowed for only AST 460, BIO 460, GLG 460 or MIC 475
BIO	**461**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**462**	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**464**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 464 or PLB 440
BIO	**465**	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 360 with C or better
BIO	**466**	Neurophysiology Laboratory	Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: BIO 465 or BIO 467 (with C or better if completed)
BIO	**467**	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 360 with C or better
BIO	**469**	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 360 with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**472**	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**482**	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 480 with C or better
BIO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	**490**	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 390 with C or better
BIO	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MIC, MBB, HPS or PLB 495
BIO	**496**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Junior or senior standing; Students who have credit for MBB 496, PLB 496, HPS 496 or MIC 496 may not enroll in BIO 496
BIO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
BIO	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
BIO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**502**	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506
BIO	**515**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516

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BIO	**516**	Foundations of Bioethics	Advanced introduction to the theoretical and normative foundations of the field of bioethics. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**521**	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		You may not enroll in BIO 521 if you have credit for BIO 421
BIO	**522**	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**524**	Ecosystems	Structure and function of terrestrial and aquatic ecosystems, with emphasis on productivity, energetics, biogeochemical cycling, and systems integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**529**	Advanced Limnology	Recent literature, developments, methods, and limnological theory; field and lab application to some particular topic in limnology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**543**	Molecular Genetics	Nature and function of the gene; emphasis on the molecular basis of inheritance and gene expression in procaryotes and eucaryotes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**545**	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**546**	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 446, 546, BIO 446 or 546
BIO	**550**	Advanced Cell Biology	Applies contemporary electron microscopic and biochemical/molecular techniques for studying eukaryotic cell functions. Mechanisms of intracellular protein trafficking.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**552**	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**561**	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**563**	Environmental Physiology	Physiological responses and adaptations of animals to various aspects of the physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
BIO	**564**	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**568**	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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BIO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**610**	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**611**	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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BIO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**130**	Introduction to Environmental Science	Introduces soil resources, their physical and chemical properties, classification, energy dynamics, and the role they play in environmental quality.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
BIO	**300**	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG	
BIO	**301**	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. fee Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	**305**	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	Pre-requisites: Minimum Sophomore standing
BIO	**306**	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ENG101 or ENG 105 with C or better; BIO181 (or BIO188) and BIO182 (or BIO187) with C or better
BIO	**320**	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better; CHM 113 and 116 with C or better
BIO	**331**	Animal Behavior	Evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**332**	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and qualification of animal behavior and interpretation of behavior within an evolutionary framework. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: BIO 331 or LSC 331 (with C or better if completed)
BIO	**345**	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; CHM 113 and CHM 116 with C or better
BIO	**353**	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245 or both PLB 200 & PLB 201) with C or better; CHM 113 and CHM 116 (or CHM 117 and CHM 118) with C or better
BIO	**354**	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	**360**	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better; CHM 116 or CHM 118 with C or better
BIO	**370**	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**385**	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**393**	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	**415**	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better

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BIO	**423**	Population and Community Ecology	Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
BIO	**443**	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	**453**	Animal Histology	Microscopic study of animal tissues. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**471**	Ornithology	Biology of birds. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**473**	Ichthyology	Systematics and biology of recent and extinct fishes. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**474**	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better
BIO	**480**	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
BIO	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MIC, MBB, HPS or PLB 495
BIO	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
BIO	**100**	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**181**	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
BIO	**182**	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**201**	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	
BIO	**202**	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SG	Pre-requisites: BIO 201 with C or better
BIO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**300**	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BIS in Organizational Studies student; Minimum Sophomore status; ENG 102, 105 or 108 with C or better; Credit is allowed for only BIS 300 or 394 (Introduction to Org Studies)
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**301**	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; Activation of BIS eligibility student group by a BIS advisor
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**302**	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies students; minimum cumulative GPA of 2.00; BIS 301 with a grade of C or better
BIS	**350**	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity. Prerequisites: sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & C	Pre-requisites: Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**370**	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		

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BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**401**	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**402**	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	**470**	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: BLS student; BIS 370 with C or better; Senior status; ENG 102, 105 or 108 with C or better
BIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
BIS	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
BIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
BIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
BIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
BLE	**511**	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**514**	Bilingual/Multicult-Spec Educ	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**515**	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**520**	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**521**	Primary/Elementary Communication Arts in Bilingual Education	Examines bilingual/biliterate development of elementary school children, bringing together native and second language, oral language, and literacy development findings with educational practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**524**	Secondary Sheltered ESL Content Teaching	Teaching and assessing ESL adolescents in the content areas with an emphasis on integrating language acquisition principles with content learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**526**	SEI for Elementary Schools	Prepares elementary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**527**	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**528**	Social Studies for Bilingual/ESLTeachers	Provides language and instructional methodologies and assessment strategies relevant to bilingual/multicultural students in social studies content delivered in Spanish and English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**529**	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**535**	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**537**	Language Structure Aquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Credit is allowed for only BLE 537 or LIN 510

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BLE	**541**	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**543**	Bilingual Education Models	Bilingual education programs in other countries; analysis of political, social, economic, and educational implications; practice in planning bilingual education curricula. See also offerings under MCE, SED, SPE, and SPF.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**561**	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Latino/a and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	**510**	Foundations of Structured English Immersion	Prepares teachers for linguistically diverse classrooms, including Structured English Immersion knowledge to meet the Augmented Provisional SEI Endorsement: ELL Proficiency Standards, Assessment Objectives, Foundations of SEI and SEI strategies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**578**	Student Teaching in the Elementary School	Supervised teaching in the area of specialization. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BLE	**220**	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
BLE	**322**	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**324**	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**335**	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**396**	Field Experience I	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**397**	Field Experience II		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**400**	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**407**	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**408**	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BLE	**411**	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**412**	Mathematics Curriculum, Instruction and Assesment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**413**	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**414-W**	Bilingual/ESL Curriculum and Organization	ESL curriculum content and organization, including program model effectiveness, language assessment and language usage, special needs and parent involvement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**455**	Social Studies Methods, Management, and Assessment in Elementary BLE/ESL Settings	Examines methods, classroom management strategies, and assessment techniques for social studies instruction in elementary BLE/ESL classes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**470**	Student Teaching Seminar	Concurrent course with the student teaching experience that provides support, content, and critical evaluation opportunities directly related to teaching practices.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**478**	Student Teaching in Diverse Language Classrooms	Student teaching in diverse language classrooms. Focuses on use of English language learning and bilingual strategies; integrates all previous course work. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program

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BLE	**479**	Capstone Seminar in Bilingual/ESL Education	Reflective, experience-based integration of theory and practice; professional development for bilingual/ESL teachers.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**481**	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
BLE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
BLE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
BLE	**496**	Field Experience III	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
BLE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BME	**100**	Introduction to Bioengineering	Introduces profession of bioengineering: bioengineering design process, teaming, computer models in bioengineering, communications skills, career planning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Bioengineering and Pre-Med Engineering student; Pre/Co-requisite: ENG 101, 105, or 107 with C or better
BME	**111**	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisite: Engineering student
BME	**112**	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisite: Engineering student
BME	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**200**	Conservation Principles in Bioengineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisite: CHM 114 or CHM 116 with C or better; PHY 131 and PHY 132 with C or better; BIO 188 (or BME 111 and BME 112) with C or better; Pre/Co-requisite: MAT 275
BME	**235**	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering student; BIO 188 (or BME 111 and BME 112) with C or better, CHM 114 or CHM 116 with C or better; Pre/Co-requisite: PHY 131 and PHY 132.
BME	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**300**	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE Junior, Senior or Post-Bac; BME 100 with C or better; ENG 102, 105 or 108 with C or better
BME	**318**	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 235 with a C or better
BME	**331**	Bioengineering Transport Phenomena	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 212, MAT 275 (or MAT 274), CHM 341, and BME 200 with C or better
BME	**350**	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BSE/BS student; EEE 202 with C or better; MAT 274 or MAT 275 with C or better; Pre/Co-requisite: MAT 343

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BME	**370**	Microcomputer Applications in Bioengineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 235 with C or better; BME 350 with a C or better
BME	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**413**	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; BME 370, BME 235 with C or better
BME	**416**	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	**417**	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.	L	Pre-requisite: BME 318; BME 331; BME 370; IEE 380; BME 300 with C or better; Pre/Co-requisite: BME 413
BME	**419**	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 350 and BME 370 with C or better
BME	**423**	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.	L	Pre-requisites: BS/BSE Engineering, pre-requisite or co-requisite:BME 413
BME	**434**	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Engineering BS or BSE student; BME 331 with C or better
BME	**451**	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: BIO 353 (or MBB 245) with C or better; Students who have credit for BME 451, may not enroll in BIO 451
BME	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	**490**	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4.		Pre-requisites: Engineering BS or BSE student; BME 417with C or better
BME	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		
BME	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Pre-requisites: Must be an Honors student
BME	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7		Pre-requisite: Bioengineering or Pre-Med Engineering BS or BSE student
BME	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	**521**	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**522**	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**524**	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**525**	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2.		Pre-requisites: Graduate Engineering students only
BME	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**534**	Transport Processes II	Continuation of BME 533 or CHE 533, emphasizing mass transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BME	**566**	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy, and research. Lab experiments using diagnostic radiology, fluoroscopy, ultrasound, and CAT scanning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BME	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**501**	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI Graduate student
BMI	**502**	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI Graduate student
BMI	**505**	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI 502 with a C or better; admission to a graduate program in the School of Computing and Informatics

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	**511**	Decision Support and Evidence-Based Practice	Biomedical decision making and the tools and techniques for decision support, including artificial intelligence and machine learning techniques.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**515**	Advanced Biostatistical Methods	Understanding biomedical data; how to use statistical methods and software to correctly analyze biomedical data.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: Admission to any SCI graduate program
BMI	**516**	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI Graduate student; BMI 501 with C or better
BMI	**520**	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI Graduate student; BMI 505 and BMI 516 with C or better
BMI	**540**	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI 501 with C or better, and admission to any BMI graduate program
BMI	**541**	Cognition and Decision Making in Healthcare	Conceptual and methodological issues in cognitive science and medical informatics, including design and use of technology in medical settings.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisite: BMI Graduate student
BMI	**555**	Medical Information Management	Database theory and information management systems with applications to biomedical domain, including use of databases in the Web context.	N	LEC	N	OPT	Graduate College	Biomedical Informatics Program	3.		Pre-requisites: BMI Graduate student; CSE 412
BMI	**560**	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1.		Pre-requisite: Biomedical Informatics PhD student
BMI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	GNA	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Graduate College	Biomedical Informatics Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-4		Pre-requisite: BMI Graduate student
BMI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Biomedical Informatics Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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BMI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Graduate College	Biomedical Informatics Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Biomedical Informatics Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BMI	**101**	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**102**	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 101 with B or better
BMI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BMI	**201**	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GRD	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**211**	Modeling Biomedical Decisions	First semester of a three-emester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**221**	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**301**	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**311**	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**312**	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**330**	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**332**	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		

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BMI	**461**	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**462**	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**465**	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**466**	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better
BMI	**482**	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		
BMI	**483**	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	School of Letters & Sciences	Biomedical Informatics Program	3.		Pre-requisite: BMI 482 with C or better
BMI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	Biomedical Informatics Program	1-4		
BUA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**300**	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	1.		
BUA	**330**	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		
BUA	**380**	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**381**	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.
BUA	**382**	Small Business Sales and Market Development	Building and maintaining customers, developing a market identity and a niche, and the importance of sales.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with min 2.00 ASU Cum GPA, OR Graduate student; must not have previously earned credit in MKT 395.
BUA	**383**	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**384**	Small Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**440**	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 441 with a C or better.
BUA	**441**	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Faculty of Business Administration	3.		Pre-requisites: W. P. Carey BS or BA student and minimum 87 earned hours and FIN 300, MGT 300, MKT 300, SCM 300 with a C or better. May not enroll if completed AGB 414 or BUA 440 with a C or better.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Faculty of Business Administration	1-6	L	Pre-requisites: Must be an Honors student
BUA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-4		
BUA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-7		
BUA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Faculty of Business Administration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	**502**	Organization and Management of Cooperative Programs	Work-study programs for business occupations in high schools and community colleges.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
BUE	**480**	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**481**	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
BUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
BUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
BUS	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		
BUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
BUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	0.5-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student

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BUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	**520**	Modeling and Computational Biology	Key mathematical and computational techniques for bioinformatics. Numerical and visualization software; scripting, database management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**521**	Applications and Complex Problem Solving in Computational Biology	Continuation of CBS 520. Key mathematical concepts. Team solution of bioinformatics applications, project writing, and presentation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisite: CBS 520 with B or better
CBS	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CCS	**446**	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of Chicana and Chicano Studies content into elementary and secondary curriculum; designed for teachers who work with Chicana and Chicano students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
CDE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

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CDE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**338**	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	2-4		
CDE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**430**	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
CDE	**437**	Infant Family Assessment and Observation	Examines strategies for implementing developmental assessments and observations of young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
CDE	**444**	Risk and Variation in Child Development	Impact that constitutional and environmental risk factors have on young children and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
CDE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
CDE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
CDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
CDE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
CDE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
CDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
CDE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**531**	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**533**	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**534**	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: CDE 531; FAS 500
CDE	**570**	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**571**	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**572**	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**573**	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**574**	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**575**	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**576**	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-IFP student
CDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**610**	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**612**	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: CDE 531 with C or better
CDE	**634**	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Prerequisite: CDE 534
CDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	THE	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CDE	**232**	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
CED	**111**	Exploration of Education	Education as an instrument in the development of the individual and society, and its significance as an American institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	

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CED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**250**	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
CED	**294**	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
CED	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
CED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
CED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
CED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
CED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CED	**522**	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**523**	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**525**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COE 501
CED	**527**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**528**	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CED	**534**	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**545**	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**567**	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	**577**	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling Psychology MC or PhD student
CED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CED	**672**	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	**100**	Introduction to Civil and Environmental Engineering	Introduces basics of civil and environmental engineering design, team work, ethics, communication and management skills, modeling, problem solving, computer applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		Pre-requisites: Civil Engineering students only
CEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**210**	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better
CEE	**212**	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 and MAT 275 (or MAT 274) completed with C or better
CEE	**213**	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: CEE 210 (or CEE 211) with C or better; MAT 274 (or MAT 275) with C or better
CEE	**281**	Surveying	Theory and fieldwork in construction and land surveys. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		
CEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**300**	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	L	Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**312**	Engrg Materials		N	LEC	N	CNV	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	2.		
CEE	**321**	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 212 (or CEE 211 or MAE 212) with C or better; CEE 213 with C or better; Pre- or Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	**341**	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering student; CEE 212 (or CEE 211 or MAE 212) and CEE 213 with C or better; Pre/Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	**351**	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**353**	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: BSE Civil Engineering student; CEE 213 with C or better
CEE	**361**	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: BSE Civil Engineering students; CEE 213 with a C or better; CHM 114 or CHM 116 with a D or better; Pre- or Co-requisite: IEE 380 with D or better if completed
CEE	**372**	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	CS	Pre-requisites: Engineering BSE students; MAT 274 or MAT 275 & MAT 267 or MAT 272 (grade of C or better); MAT 267 or MAT 272 may be taken as a co-requisite. Credit for only CEE 384 or MAE 384
CEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**400**	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.	(L or HU) & H	Pre-requisites: Civil and Environmental Engineering BS or BSE student; CEE 300 with C or better OR Non-CEE Juniors or Seniors
CEE	**412**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 412 or 511.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; CEE 351 and CEE 353 with C or better
CEE	**420**	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**421**	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better
CEE	**423**	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	**432**	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532

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CEE	**440**	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Engineering BS/BSE student; CEE 341 or MAE 340 with C or better
CEE	**441**	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	**452**	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 with C or better
CEE	**462**	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	**466**	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	**467**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 467 or 567. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or MIC 220 with a grade of C or greater
CEE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 361 or CHE 334 with a C or greater
CEE	**474**	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	**475**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	**481**	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better
CEE	**483**	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	**485**	Sustainable Civil and Environmental Systems Engineering	Provides working knowledge of operations research methodologies, both the traditional and more modern metaheuristic techniques, to evaluate sustainable civil engineering systems and quantitatively evaluate project alternatives involving single or multiple goals.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Civil Engineering BSE student; CEE 300; MAT 242 with C or better
CEE	**486**	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4.	L	Pre-requisites: Civil Engineering BSE students only; Must have completed CEE 321 and CEE 341 and CEE 351 and CEE 361 and CEE 372 with a grade of C or better
CEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Pre-requisites: Honors students only
CEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisites: Engineering Honors students only
CEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	**511**	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection. Credit is allowed for only CEE 511 or 412.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisites: Graduate Civil Engineering students only
CEE	**512**	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student

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CEE	**513**	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**514**	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Graduate Civil Engineering student
CEE	**515**	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate tudent
CEE	**516**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**521**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**522**	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**524**	Advanced Steel Structures	Strength properties of steel and their effects on structural behavior. Elastic design of steel structures. Plastic analysis and design of beams, frames, and bents. Plastic deflections. Plastic design requirements. Multistory buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**526**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		Pre-requisite: Engineering CEE Graduate student
CEE	**527**	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**530**	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**532**	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	**533**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**536**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**540**	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**541**	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**543**	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**544**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		You may not enroll in CEE 544 if you have credit in SOS 551
CEE	**546**	Free Surface Hydraulics	Derivation of 1-D equations used in open channel flow analysis; computations for uniform and nonuniform flows, unsteady flow, and flood routing. Mathematical and physical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student

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CEE	**550**	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**551**	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**553**	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**554**	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**555**	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**557**	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**558**	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**559**	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**560**	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**561**	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**562**	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	**563**	Environmental Chemistry Laboratory	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**564**	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**567**	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations. Credit is allowed for only CEE 567 or 467.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre Requisites: Engineering CEE Graduate Students Only
CEE	**568**	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CEE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**573**	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student
CEE	**576**	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**581**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	**582**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3.		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student

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CEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering MS or MSE student
CEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1.		Pre-requisite: Civil Engineering PhD student
CEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CEN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CEN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**100**	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2.		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**211**	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHM 116 with C or better; MAT 266 or MAT 271 with C or better
CHE	**231**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 231 or 501.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: CHE 211 with C or better; MAT 266 or MAT 271 with a C or better
CHE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**334**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 334 or 502.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 231 or 331 with C or better
CHE	**342**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 342 or 504.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 211 or CHE 311 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed) Credit allowed for only CHE 342 or CHE 504
CHE	**352**	Transport Laboratories	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; CHE 334
CHE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**432**	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with a C or better OR Graduate Engineering student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	**433**	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student; CHE 334 and CHE 342 with C or better
CHE	**442**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 442 or 505.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE students; CHE 334 and CHE 342 with a C or better OR Graduate Engineering students
CHE	**451**	Chemical Engineering Laboratory	Operation, control, and design of experimental and industrial process equipment; independent research projects. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; CHE 334 with C or better; CHE 342 with C or better; MAE 384 (or ECE 384) with C or better OR Graduate Engineering students
CHE	**458**	Semiconductor Material Processing	Introduces the processing and characterization of electronic materials for semiconductor applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BSE student; CHE 334 and CHE 342 with C or better OR Graduate Engineering student
CHE	**461**	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	CS	Pre-requisites: Engineering BS or BSE student; MAT 274 or MAT 275 with C or better; MAE 384 or CEE 384 with a C or better OR Graduate Engineering student
CHE	**462**	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.	L	Pre-requisites: Engineering BS or BSE student; CHE 432, CHE 442 and CHE 433 with C or better OR Graduate Engineering student
CHE	**469**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 469 or 569.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		
CHE	**475**	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisite: Engineering BSE student
CHE	**476**	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	**490**	Chemical Engineering Projects	Individual projects in chemical engineering operations and design.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-5		Pre-requisite: Engineering BSE student
CHE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Pre-requisites: Honors students only
CHE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Pre-requisites: Honors students only
CHE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	**496**	Professional Seminar	Professional and ethical aspects with a discussion of responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	**501**	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems. Credit is allowed for only CHE 501 or 231.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**502**	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors. Credit is allowed for only CHE 502 or 334.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**504**	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques. Credit is allowed for only CHE 504 or 342.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Students who have credit for CHE 342, may not enroll in CHE 504
CHE	**505**	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design. Credit is allowed for only CHE 505 or 442.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in MSE 518, EEE 518, MAE 518 or MSE 475 you may not enroll in CHE 518
CHE	**527**	Advanced Applied Mathematical Analysis in Chemical Engineering	Formulation and solution of complex mathematical relationships resulting from the description of physical problems in mass, energy, and momentum transfer and chemical kinetics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**533**	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student

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CHE	**543**	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate Engineering student
CHE	**544**	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**561**	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**569**	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality. Credit is allowed for only CHE 569 or 469.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student

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CHI	**101**	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
CHI	**102**	First-Year Chinese II	See CHI 101. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:Must have completed CHI 101 with a grade of D or better or be currently enrolled
CHI	**120**	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	
CHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**201**	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 102 with a grade of D or better or currently enrolled
CHI	**202**	Second-Year Chinese II	See CHI 201. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:Must have completed CHI 201 with a grade of D or better or currenlty enrolled
CHI	**205**	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
CHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**301**	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 202 with a grade of C or better or currently enrolled
CHI	**302**	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:CHI 301 with a grade of C or better or currently enrolled
CHI	**307**	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 302, or JPN 202, or KOR 202 with a grade of C or better or currently enrolled
CHI	**308**	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:CHI 307 with a grade of C or better, or currently enrolled
CHI	**309**	Chinese Conversation	Aural/oral drills using contemporary stories, articles, and essays. For students with lower-level proficiency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:Must have completed CHI 202 with a grade of D or better or currently enrolled
CHI	**310**	Chinese Conversation	See CHI 309.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**311**	Chinese Conversation	Intensive aural/oral practice in modern Chinese. For students who have lived in China or a Chinese-speaking environment.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		
CHI	**312**	Chinese Conversation	See CHI 311.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites:CHI 202 with a grade of D or better or currently enrolled
CHI	**321**	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
CHI	**322**	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
CHI	**345**	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**380**	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
CHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**401**	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with C or better
CHI	**402**	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 401 with C or better
CHI	**407**	Chinese for Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 402 with a C or better

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CHI	**408**	Chinese for Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 407 with C or better
CHI	**430**	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	**450**	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianti wen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 308 with a grade of C or better
CHI	**461**	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuanqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 and CHI 307 with a grade of C or better
CHI	**462**	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisties: CHI 302, and CHI 308
CHI	**470**	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: CHI 302 with a grade of C or better
CHI	**482**	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites; CHI 302 and CHI 308
CHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
CHI	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
CHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**514**	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**520**	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, economics, or other fields.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**543**	Chinese Language and Linguistics	Analysis and discussion, within the framework of linguistic theory, of selected problems in Chinese phonetics, morphology, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**561**	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**585**	Problems of Translation	Theories and practice of translation: strategies for handling a variety of Chinese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: Students who have credit for CHM 107, may not enroll in CHM 101
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	

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CHM	**111**	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisite: Biochemistry or Chemistry major; CHM 117 with C or better if completed
CHM	**112**	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre-requisites: Biochemistry or Chemistry major; CHM 111 with C or better; Pre/Co-requisite: CHM 118 with C or better if completed
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**114**	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**117**	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: Chemistry or Biochemistry majors; CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre-or Co-requisite: MAT 170 (or 210, 251, 265 or 270 (with C or better if completed); Credit for CHM 113 or 117 only
CHM	**118**	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 117 with C or better; Chemistry and Biochemistry majors only
CHM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
CHM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)

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CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**240**	Introduction to Physical Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.	CS	Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**302**	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	**303**	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre/Co-requisites: CHM 325 with C or better if completed
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**333**	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds. Credit is allowed for only CHM 333 or 231 or 233.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Must be a Biochemistry or Chemistry student; CHM 116 or 118 with C or better
CHM	**334**	Organic Chemistry for Majors II	Continuation of CHM 333. Credit is allowed for only CHM 334 or 234.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Biochemistry or Chemistry student; CHM 333 with a C or better
CHM	**337**	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions. Credit is allowed for only CHM 337 or 237. Fee.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; Pre- or Co-requisite: CHM 333 (with C or better if completed)
CHM	**338**	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337. Credit is allowed for only CHM 338 or 238. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Biochemistry or Chemistry student; CHM 337 with C or better; Pre or Co-requisites: CHM 334
CHM	**341**	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 114, 116 or 118 with C or better; CHM 231, 233 or 333 with C or better; MAT 210, 251, 265 or 270 with C or better; PHY 101, 112 or 131 with C or better.
CHM	**343**	Physical Chemistry Laboratory	Physical chemistry experiments. Credit is allowed for only CHM 343 or both CHM 348 and 349. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: CHM 341 with C or better or co-enrolled in CHM 341
CHM	**345**	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Prerequisites: CHM 240 with C or better or both MAT 272 and 274 with C or better
CHM	**346**	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 345 with C or better
CHM	**348**	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. fee. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	**349**	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	**392**	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**424**	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	**433**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	**434**	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisite: CHM 433 or CHM 531 with C or better
CHM	**435**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: BCH 361 (or BCH 461), BIO 353 and CHM 234 (or CHM 334) with a C or better; You may not enroll in CHM 435 if you have credit for CHM 535

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CHM	**452**	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit. fee	N	REC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-2	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	**453**	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**460**	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	**471**	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre/Co-requisite: CHM 346 with C or better if completed
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		
CHM	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341(or 346) or GLG 321 with C or better
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		
CHM	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Must be an Honors student
CHM	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6	L	Pre-requisites: Must be an Honors student
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		
CHM	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-6		Pre-requisites: Barrett Honors College students only
CHM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-7		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-3		
CHM	**501**	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**523**	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**524**	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**525**	Analytical Spectroscopy	Theoretical and practical considerations involving the use of optical instruments for chemical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
CHM	**531**	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 433 or CHM 531
CHM	**532**	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**535**	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Students may not enroll in CHM 535 who have credit in CHM 435
CHM	**537**	Organic Reactions	Organic synthetic methodologies and important synthetic reactions emphasizing recently discovered reactions of preparative value. Protection/deprotection synthetic strategies; peptide synthesis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CHM	**541**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM 541 or MSE 524
CHM	**543**	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry. Covers electronic structure methods and computer simulation techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Credit is allowed for only CHM, NAN or PHY 544
CHM	**545**	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**546**	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**548**	Chemical Kinetics and Dynamics	Experimental and theoretical aspects of time-dependent processes in chemistry. Topics include kinetics of chemical reactions, diffusion, and relaxation phenomena in ordered and disordered materials.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**549**	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**553**	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**571**	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CHM	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Chemistry and Biochemistry	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**233**	General Organic Chemistry I	Chemistry of organic compounds. Credit is allowed for only CHM 233 or 231 or 333.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**234**	General Organic Chemistry II	Continuation of CHM 233. Credit is allowed for only CHM 234 or 334.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites:CHM 233 or CHM 333 with a C or better
CHM	**237**	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity. Credit is allowed for only CHM 237 or 337.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre- or Co-requisites: CHM 233 (C or better if completed)
CHM	**238**	General Organic Chemistry Laboratory II	Continuation of CHM 237. Credit is allowed for only CHM 238 or 338. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: CHM 237 or 337 with C or better; Pre or Co-requisites: CHM 234 (with C or better if completed)
CHM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**325**	Analytical Chemistry	Principles and methods of chemical analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	**326**	Analytical Chemistry Laboratory	Experiments in chemical analysis. Fee.	N	REC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
CHM	**327**	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
CHM	**328**	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	2.		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
CHM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
CHM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		

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CHM	**101**	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	
CHM	**107**	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This is a lecture course which may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Credit earned for CHM 101 and any combination of CHM 107 and 108 cannot be used simultaneously.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ	
CHM	**108**	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	
CHM	**113**	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences. Credit is allowed for only CHM 113 or 117. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 101 with C or better or ALEKS Math Placement Test with score of 50% or higher or Pre/Co-requisite: MAT 170, MAT 210, MAT 251, MAT 265 or MAT 270 (with C or better if completed); Credit is allowed for only CHM 113 or CHM 117
CHM	**116**	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry. Credit is allowed for only CHM 116 or 115 or 118. Fee.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SQ	Pre-requisites: CHM 113 or CHM 117, or CHM 114 with C or better
CHM	**231**	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Credit is allowed for only CHM 231 or 233 or 333. Both CHM 231 and 235 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SQ	Pre-requisites: CHM 101, or CHM 114, or 116, or 118 with C or better
CHM	**235**	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit. fee	N	REC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SQ	Pre/Co-requisites: CHM 231 with C or better
CHM	**480**	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving. fee	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
CHP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CHP	**501**	Community Health Assessment and Analysis	Provides theory and practice in community assessment and analysis applicable to community health practice.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Nursing) or Nursing (Comm Health Adv Prac) student; CHP 500 with B or better; Co-requisite: NUR 581
CHP	**502**	Community Health Program Planning and Evaluation	Utilizes planning and evaluation theory in planning programs to meet identified health needs of communities.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing (Comm Health Adv Prac) student; CHP 501 with B or better
CHP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIM	**105**	Introduction to the Concrete Industry	Overview of the history, career opportunities, job functions, and professional organizations in the concrete industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CIM	**106**	Fundamentals of Concrete: Properties and Testing	Examines effects of concrete-making materials on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: CIM 105 with C or better; Co-requisite: STP 226
CIM	**205**	Concrete Construction Methods	Forming, shoring, placing and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for foundations and other structural members.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 106 with C or better; CON 252
CIM	**206**	Application of Concrete in Construction	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CIM 205 with C or better; CON 243 with C or better
CIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	**305**	Management of Concrete Products: Ordering and Delivering	Basic understanding of managing the order and delivery process common to all concrete products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better; CON 221 with C or better
CIM	**306**	Management of Concrete Products: Production Facilities	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 305 and CON 251 with C or better; CON 271
CIM	**405**	Concrete Problems: Diagnosis, Prevention, and Dispute	Diagnose and prevent problems related to concrete production, testing, construction, and performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS student; CIM 206 with C or better
CIM	**406**	Concrete Industry Management Capstone	Intensive study of a problem appropriate to the major and the student's career interests. Lecture, student presentations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS student; CIM 405 with C or better; COM 225
CIM	**420**	Senior Concrete Lab	Reintroduces fundamental lab procedures as well as advanced testing methods. Collect data, search for literature, analyze and report on conclusions.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Contruction BS student; CIM 405 with C or better
CIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		

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CIS	**105**	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	
CIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	**220**	Programming Concepts for Accountancy Majors	Introduces business computer programming. Uses programming languages such as Visual BASIC to teach proper programming style and practice. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		
CIS	**235**	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	**236**	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.	CS	Pre-requisites: Must be an Honors student
CIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	**300**	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	**340**	Object-Oriented Modeling and Programming	Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C#. Fee.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: Must be W. P. Carey CIS BS student; AND must have completed ACC 241 or ACC 271, CIS 235 or CIS 236, CSE 181 or CSE 182, and ECN 221 with a C or greater
CIS	**360**	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-Requisites: W. P. Carey Accountancy BS student, and CIS 105 or CIS 220 or 236, ACC 231 or 261, and ACC 241 or 271 with a grade of C or better; OR W. P. Carey Computer Information Systems BS student, and CIS 235 or 236 with a grade of C or better.
CIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
CIS	**425**	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 with C or better
CIS	**430**	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as.NET and networked UNIX. fee	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360
CIS	**440**	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3.	L	Pre-requisites: W.P. Carey Computer Information Systems BS student; CIS 360 and CIS 430 with C or better
CIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Pre-requisites: Must be an Honors student
CIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W.P. Carey ACC BS or CIS BS student
CIS	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		
CIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Pre-requisites: W.P. Carey CIS BS student
CIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	**502**	Information Systems	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: W.P.Carey MBA student
CIS	**506**	Business Database Systems	Hierarchical, network, relational, and other recent data models for database systems. Processing issues such as concurrency control, query optimization, and distributed processing.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**512**	Intelligent Decision Systems and Knowledge Management	Definition, description, construction, and evaluation of computer-based decision systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**535**	Distributed and Mixed-Media Information Systems	Modern communications protocols for wireless and mobile computing, overview of network and distributed database management systems, overview of storage and multimedia delivery issues, and shared virtual reality technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CIS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CIS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CLS	**100**	Introduction to Clinical Laboratory Sciences	Introduces the field of clinical laboratory sciences. Required for Clinical Laboratory Sciences majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		
CLS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
CLS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
CLS	**310**	Principles of Clinical Chemistry I	Theory and application of principles of clinical chemistry, with emphasis on lab techniques, pathophysiology, methods of analysis, and assessment of procedure. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**320**	Principles of Clinical Microbiology I	Theory and application of principles of clinical microbiology with emphasis on isolation and identification of medically significant fungi and bacteria. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		
CLS	**330**	Principles of Clinical Hematology I/Body Fluids	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**410**	Principles of Clinical Chemistry II	Continuation of CLS 310 with emphasis on principles of advanced clinical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**411**	Advanced Applications of Clinical Chemistry	Clinical application of theory/techniques from CLS 310 and 410. Emphasizes operation of common lab instrumentation and clinical correlation. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**420**	Principles of Clinical Microbiology II	Disease mechanisms and identification of medically significant parasites, Mycobacteria, Actinomycetes, Chlamydia, Rickettsia, Mycoplasma, and viruses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
CLS	**421**	Advanced Applications of Clinical Microbiology	Practical lab application of the principles of specimen collection, processing, detection, identification, and antimicrobial testing of medically significant bacteria, fungi, and parasites. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**430**	Principles of Clinical Hematology II/Hemostasis	Theory and applications of principles in hematology with emphasis on etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**431**	Advanced Applications of Clinical Hematology	Practical lab application of methods/techniques used to evaluate and diagnose blood dyscrasias/hemostatic defects. Applied techniques in body fluid analysis. Minimum 180 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**440**	Principles of Clinical Immunology/Immunohematology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
CLS	**441**	Advanced Applications of Clinical Immunology/Immunohematology	Practical lab application of the principles of serological methods used in diagnosing disease and selecting blood components for transfusion therapy. Minimum 135 hours practicum.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
CLS	**450**	Principles of Clinical Laboratory Administration	Principles of management, emphasizing the clinical lab. Basic management process, personnel supervision, identification, and allocation of resources. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	
CLS	**460**	Principles of Clinical Laboratory Education	Principles of learning, with application to the development of instructional objectives, strategies, and evaluation for teaching-learning situations in the lab. Both CLS 450 and 460 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	
CLS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CMN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**502**	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**505**	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**506**	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**515**	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**516**	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**520**	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**522**	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts students
CMN	**531**	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**532**	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**550**	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**551**	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	**557**	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**565**	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**570**	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not adressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisite: Communication Studies Master of Arts student
CMN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisite: Communication Studies Master of Arts student

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CMN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisite: Communication Studies Master of Arts student
CMN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
COE	**501**	Introduction to Research and Evaluaton in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**281**	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	**298**	Honors Directed Study		N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honor student
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**323**	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	C	Pre-requisites: Must have a minimum cumulative GPA of 2.50; Must have completed COM 100 with a grade of C or greater
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**326**	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		
COM	**341**	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**404**	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**407**	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA of greater than or equal to 2.50; Must have completed COM 308 with a grade of C or greater
COM	**408**	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must have a cumulative GPA greater than or equal to 2.50; Must have completed COM 308 with a C or better. Credit given for COM 408 or 508 only
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**426**	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**441**	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	**442**	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	**445**	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	**446**	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Minimum 2.50 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications students only and have completed 56 or more hours; Minimum cumulative GPA of 2.50; COM 225 and COM 308 with a C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		

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COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisites: Must have a minimum cumulative GPA of 2.50
COM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**501**	Research Methods in Communication	Critical analysis of systems of inquiry in communication, focusing on the identification of variables and approaches to conducting research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**504**	Theories and Models in Communication	Theory construction, metatheoretical concerns, models, construct definition, and comparative analysis of current theories in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**508**	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508
COM	**509**	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Must be a Graduate Communications student
COM	**521**	Rhetorical Criticism of Public Discourse	History and significance of rhetorical theory and criticism in the analysis of public discourse.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications Graduate student
COM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**604**	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**607**	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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COM	**608**	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**609**	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3.		Pre-requisite: Communications PhD student
COM	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**124**	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	C	
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-req 25 minimum hours
COM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**309**	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**319**	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	**320**	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Minimum 2.50 GPA
COM	**321**	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or HU) & H	Pre-requisites: COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	**324**	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**325**	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	**353**	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**414**	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**416**	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**417**	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.0 GPA
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**422**	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: Must be a Junior and have a GPA of 2.0 or greater, AND completed ENG 101 or 105 with a grade of C or greater
COM	**424**	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**429**	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**451**	Communication and Work Relationships	Communication principles and practices associated with supervisory, peer, and client relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 100; Minimum 45 completed hours; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**454**	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Minimum 2.50 GPA
COM	**457**	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: COM 309 or COM 407 with C or better; Minimum 2.0 GPA
COM	**463**	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**465**	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: Minimum 2.50 GPA
COM	**471**	International Communication	Explores the political, economic, sociocultural, and communicative dimensions of mediated communication across borders and the processes of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	Pre-requisites: Minimum 2.0 GPA; CMN 463 or COM 463 with C or better
COM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Communication studies major or Public Relations and Strategic Communication minor students; minimum 56 hours; minimum cumulative GPA of 2.80; COM 225 (CMN 225) with C or better; COM 308 or COM 309 with C or better
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
COM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
COM	**100**	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**110**	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have a GPA of greater than or equal to 2.25
COM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
COM	**207**	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	**222**	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	**225**	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	**230**	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
COM	**241**	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	**250**	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisite: Minimum 2.25 GPA
COM	**259**	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Non-Communication students only; Must have 25 or greater earned hours
COM	**263**	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	**300**	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	**301**	Introductory Theories and Principles of Communication: Communication in Relationships, Organizations	Integrated introduction to the theories and principles of communication in public, interpersonal, and organizational contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3-9		
COM	**308**	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum cumulative GPA of 2.50
COM	**310**	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	**312**	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	**316**	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	**317**	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables. Not open to students with credit in COM 294 ST: Beyond Words.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Minimum 2.50 GPA; COM 100 or COM 207 with C or better
COM	**326**	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
COM	**371**	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	**382**	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Must have a Cumulative GPA of 2.50 or greater
COM	**400**	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	Prerequisites : Interdisciplinary Studies or Business Communication student; Sophomore or higher; Minimum GPA of 2.00; COM 100 and COM 225 OR only COM 259 with a C or better
COM	**410**	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	**411**	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better
COM	**421**	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	**430**	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**450**	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	**453**	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Minimum 2.50 GPA
COM	**492**	Honors Directed Study		Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		Pre-requisites: Must be an Honors student
COM	**493**	Honors Thesis		N	PRA	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
CON	**100**	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2.		
CON	**101**	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	HU & H & G	
CON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		

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CON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**221**	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: PHY 111 and PHY 113 and MAT 265 (or MAT 270) with C or better
CON	**223**	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 221 with C or better
CON	**241**	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**243**	Heavy Construction Equipment, Methods, and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**244**	Working Drawing Analysis	Provides the ability to read and understand architectural plans; to understand drawing symbols, dimensions, abbreviations, and terms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		
CON	**251**	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software. fee	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: MAT 265 or MAT 270 with C or better
CON	**252**	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**271**	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: CON 252 with D or better; CON 243 with C or better
CON	**273**	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		
CON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**296**	Field Internship	Participation as interns on construction projects to observe and experience the daily activities. fee	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Construction students only
CON	**310**	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 221 with C or better; CON 223 with C or bettter
CON	**345**	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; PHY 111 (or PHY 121) with C or better; PHY 113 (or PHY 122) with C or better; CON 221 with C or better; CON 252
CON	**377**	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	**383**	Construction Estimating	Analyzes construction drawings and specifications. Methods used in estimating process. Quantity surveying techniques for CSI divisions. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisites: Construction BS or Housing & Urban Development BSD students; CON 243 and CON 221 with a C or better; CON 252 with a D or better
CON	**389**	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students; CON 221 with C or better; CON 251 with D or better
CON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	**424**	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Engineering Construction BS students; CON 223 with C or better; Pre or Co-requisites: CON 310 (with C or better if completed)
CON	**446**	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: COM 225; CON 221 with C or better
CON	**450**	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Construction BS students only; Must have completed CON 310 with a grade of D or greater or be currently enrolled
CON	**453**	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4.		Pre-requisite: Construction BS student; CON 271, or CON 371; CON 383 with C or better; Co-requisite: CON 495
CON	**455**	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 495 and CON 453 with C or better
CON	**468**	Mechanical and Electrical Estimating	Analysis and organization of performing a cost estimate for both mechanical and electrical construction projects. Computer usage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 273; CON 345 and CON 383 with C or better
CON	**471**	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Prerequisite: Construction BS student; CON 453 with C or better

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CON	**472**	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	**477**	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	**483**	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction BS student; CON 383 with C or better
CON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Construction BS students; Must have completed CON296 with D or better or currently enrolled
CON	**486**	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites:Construction BS Student; Must have a C or better in CON 383
CON	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		
CON	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Pre-requisites: Must be an Honors student
CON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	**495**	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	CS	Pre-requisites: Engineering and Design BS and BSD students only; Must have completed CON 383 and CON 389 with a grade of C or better
CON	**496**	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.	L	Pre-requisites Engineering CON BS students; Must have completed COM 225 with a D or better, and CON 453 with a C or better
CON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	**501**	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**540**	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**545**	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction MS student; CON 495 with B or better
CON	**547**	Strategic Planning	Business planning process of the construction enterprise. Differences between publicly held and closely held businesses and their exposure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**551**	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**554**	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**561**	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering Graduate student
CON	**563**	Facility Management Fundamentals	Operations and maintenance, environmental issues, computerized management and maintenance systems, strategic planning, asset management, construction and design, and LEED/LEED-EB.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**565**	Information Measurement Theory I	Simplistic, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Construction Graduate student
CON	**567**	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**570**	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor's viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CON	**571**	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: CON 570 with C or better
CON	**575**	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**589**	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3.		Pre-requisite: Engineering MS, MSE or PHD student
CON	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Construction graduate student
CON	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**700**	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student

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CON	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CON	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**111**	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	
CPI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**211**	Game Development II	Introduces multiplayer games, artificial intelligence, and tile-based worlds using Macromedia Flash. Uses ActionScript tool to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate student or BIS student with Computer Gaming emphasis; CPI 111 with C or better
CPI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**311**	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with C or better
CPI	**321**	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 211 with C or better
CPI	**360**	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 200 with C or better
CPI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**400**	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	**411**	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with C or better
CPI	**412**	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 311 with C or better

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CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisites: CPI 101 with C or better
CPI	**421**	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**422**	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Informatics BS, Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 321 with C or better
CPI	**430**	Social Simulation	Introduces computer simulation and agent-based modeling to study social systems. Credit is allowed for only CPI 430 or ASB 430.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: CPI 200 with C or better; AML 100 or MAT 142, 170, 210, 265 or MAT 270 with C or better or ALEKS placement Test with a score of 50 or higher; Minimum 56 hours; Credit is allowed for only ASB 430, AML 330 or CPI 430
CPI	**441**	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.		Pre-requisite: Computer Gaming Certificate or BIS Computer Gaming concentration student; CPI 411, CPI 412, CPI 421, CPI 422 or DCI 451 with C or better
CPI	**470**	Application of Modeling and Visualization	Applies modeling, computing, and visualization techniques to real data; presents results in a meaningful visual environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1.		Pre-requisite: CPI 400
CPI	**480**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3.	CS	Pre-requisite: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
CPI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1.		
CPI	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Pre-requisites: Must be an Honors student
CPI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPI	**101**	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CPI	**200**	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 117, 170, 210, 260, 265 or 270 with a C or better or the ALEKS Math Placement Test with a score of 67 or higher
CPI	**310**	Information and Data Management	Entity-relationship modeling, relational database design, relational algebra, SQL, XML, object-oriented modeling, and data management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:CPI 200 with a grade of C or better or currently enrolled
CPI	**420**	Technology and Society	Introduces cultural, ethical, and policy issues raised by the penetration of electronic information and communications systems into all aspects of contemporary society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: CPI 101 with C or better
CPP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-4		
CPP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		
CPP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	College of Public Programs	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**613**	Child Counseling	Applies counseling theory in working with children in clinics and elementary schools. Integrated practicum available with instructor approval.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**623**	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**634**	Organizational Development and Planned Change	Organizational/individual dynamics, including theory, analysis, techniques, and consultation/intervention strategies used in organizational development.	N	PRA	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Technology and Innovation or Fulton Engineering Graduate student
CPY	**644**	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577
CPY	**645**	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**650**	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 522
CPY	**651**	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: CED 523
CPY	**660**	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	**670**	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**671**	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**672**	Human Diversity: Social Psychological Perspectives	Implications for psychological practice of social, psychological, and biological factors in the development of behavioral differences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**674**	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**675**	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	**676**	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**677**	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	**678**	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**679**	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	**694**	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate students only
CPY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CPY	**701**	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**702**	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisite: COE 502
CPY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	**610**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRD	**620**	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRJ	**100**	Introduction to Criminal Justice	Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	
CRJ	**201**	Criminal Justice Crime Control Policies and Practices	Introduces concepts as the application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through environmental design. Students work to apply academic theory to actual crime problems in the local area.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Credit is allowed for only CRJ 201 or 294 (Criminal Justice Crime Control)

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CRJ	**225**	Introduction to Criminology	Provides a broad survey of criminal behavior and the major attempts to explain it. Topics include definitions and measurement of crime, theories of crime causation, and crime types.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Credit is allowed for only CRJ 225 or 294 (Introduction to Criminology)
CRJ	**230**	Introduction to Policing	Introduces policing in the United States covering the history of police, contemporary police work, and problems in policing.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**240**	Introduction to Corrections	Introduces the structure and function of the corrections system from historical and contemporary perspectives.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**260**	Substantive Criminal Law	Criminal liability. Crimes against persons, property, and society. Governmental sanctions of individual conduct as formulated by legislatures and the courts.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		
CRJ	**270**	Community Relations in the Justice System	Focuses on developing an informed plan and policy for incorporating research findings about the surrounding community within various justice services and agencies. Topics include social stratification, minority groups, and victimology.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	
CRJ	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**302**	Research Methods	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Also stresses methods for conducting research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Must have completed CRJ 100, or 301, JUS 100, or 105, or 305 with a grade of C or greater; or be currently enrolled in any one of these
CRJ	**303**	Statistical Analysis	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the administration of justice area.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	CS	Pre-requisites: MAT 114, 117, 119, 142, 170 or 210 with C or better; CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**304**	Criminology	Provides a basic overview of the nature, the causes and consequences, and the theories of criminal behavior.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**305**	Gender, Crime, and Criminal Justice	Studies women as offenders, victims, and professionals in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**306**	Race, Ethnicity, Crime, and Criminal Justice	Studies minority issues in the criminal justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	C	Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better
CRJ	**308**	Advanced Criminological Theory	Focuses on the definition, measurement, causes, consequences, and control of crime. Explores fundamental debates in criminological thought through original readings in the field. Emphasizes critical assessment of dominant criminological theories.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100, 201, 225 with C or better. Junior or senior standing
CRJ	**314**	Innovations in Policing	Examines current theories and research findings that guide police work, and the practical implications of evaluation within police departments.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better or currently enrolled; CRJ 230 (AJS 230) with C or better or currently enrolled
CRJ	**315**	Police Organization and Management	Provides a thorough understanding of the structure, processes, and behavior of police organizations.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better; CRJ 230 (AJS 230) with C or better
CRJ	**320**	The Adjudication Function	History and development of courts, trial by jury, and other dispute resolution mechanisms; selection and removal of judges and juries; organization, structure, and jurisdiction of courts; trial and nontrial processes of the judiciary.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:Must have completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or be currently enrolled, or co-enrolled in either of these courses
CRJ	**321**	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100 (AJS 100), CRJ 301, JUS 100, JUS 105, or JUS 305 with C or better
CRJ	**340**	Juvenile Justice	Critical examination of the history and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre- or Co-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with C or better if completed
CRJ	**350**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	SB	Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled, or co-enrolled in either of these courses
CRJ	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		
CRJ	**410**	Procedural Criminal Law	The criminal process. Constitutional and legal problems associated with arrest, search and seizure, and due process of law.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled
CRJ	**441**	Prevention of Crime and Delinquent Behavior	Theories of prevention, individual, group, and community approaches: intervention at appropriate stages; contemporary law enforcement, and corrections practices.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100 or CRJ 100 or 301 or JUS 100 or 105, or 305 with a C or greater, or currently enrolled.
CRJ	**443**	Probation and Community Corrections	Examines the probation and parole functions as well as the numerous and diverse types of community corrections programs.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites:completed AJS 100,or 301,or CRJ 100,or 301,or JUS 100,or 105,or 305 with a C or greater or be currently enrolled in one;and completed AJS 240,or CRJ 240 with a C or greater or be currently enrolled in CRJ 240.
CRJ	**461**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: Junior or senior standing
CRJ	**462**	Gangs	Critical examination of the history and development of gangs, including criminal justice system responses to gangs and gang-related behaviors.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100 with C or better; junior or senior standing

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CRJ	**463**	Occupational Crime	Overview of major issues in business, professional, and official rule violations. Includes consumer fraud, securities violations, unethical professionalism, and political corruption.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better
CRJ	**464**	Organized Crime	The nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or be currently enrolled.
CRJ	**470**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.	L or SB	Pre-requisites: completed AJS 100,OR 301,or CRJ100,OR 301,or JUS 100,or 105,or 305 with a C or greater, or enrolled in; and completed ENG 101or 105 with a C or greater
CRJ	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		
CRJ	**492**	Honors Directed Study		N	LEC	N	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6		
CRJ	**493**	Honors Thesis		N	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-6	L	Pre-requisites: CRJ 100 with a C or better; junior or senior standing; Honors student
CRJ	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisites: Junior or Senior
CRJ	**495**	Student Assessment	Students may attend a mid-semester information session on the assessment process. At the end of the semester, students take part in a standardized examination and self-administered survey. Y/E grade only. Students must register for this class their final semester.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	0.		Pre-requisites: CRJ 100 with a C or better; junior or senior standing
CRJ	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-3		Pre-requisites: CRJ 100 with C or better; junior or senior standing
CRJ	**501**	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**502**	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**503**	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**504**	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**505**	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**510**	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**511**	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**512**	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**513**	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**514**	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**515**	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**516**	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**517**	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**518**	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	**519**	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**520**	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**521**	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**522**	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**524**	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**525**	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**534**	Program Evaluation in Criminal Justice	Covers methods of program evaluation, principles of research design, and evaluation tools and resources.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Criminology and Criminal Justice	1.		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-4		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisite: Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	**601**	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**602**	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**603**	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**604**	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**605**	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**606**	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	**607**	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**608**	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**609**	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**610**	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**611**	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**612**	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**613**	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	College of Public Programs	School of Criminology and Criminal Justice	3.		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Criminology and Criminal Justice	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CRJ	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Public Programs	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**101**	Introduction to Computer Science and Engineering	Introduces topics in computer science and computer engineering; familiarization with CSE curriculum subdisciplines and topics. Design of computer software and systems, exploring and experimenting with systems, teamwork, professional opportunities, computer models and programming, communication. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	2.		
CSE	**110**	Principles of Programming with Java	Concepts of problem solving using Java, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	
CSE	**182**	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		
CSE	**183**	Success in Computer Science and Engineering Programs	Overview of the computer science and computer systems engineering fields as well as academic success tips for students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		
CSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**205**	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	CS	Pre-requisites: CSE 100 or 110 with C or better or currently enrolled

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CSE	**220**	Programming for Computer Engineering	Introduces procedure programming languages (C/C++) and hardware descriptive language (VHDL). fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites:Computer Science & Engineer PRE or BSE; Must have received a C or greater in CSE 120 or EEE 120 AND CSE 205 or CSE 210
CSE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: CSE 120 or EEE 120 with C or better; CSE 100, CSE 110 or CSE 200 with C or better OR Computer Science & Engr Graduate student; Credit for CSE 230 or CSE 330 only
CSE	**240**	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: CSE 205 with C or better
CSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**298**	Honors Directed Study		N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		
CSE	**301**	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Computer Science & Engineering BS/BSE student; CSE 205 with C or better
CSE	**310**	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engineering BSE, Computer Science BS, Computational Math Sciences BS or Biomedical Informatics BS student; CSE 205 with C or better; MAT 243 with C or better (CMS students may substitute MAT 300) or CSE Graduate students
CSE	**320**	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better; Credit for CSE 320 or CSE 422 only
CSE	**325**	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 220 with C or better or currently enrolled; CSE 230 or EEE 230 with C or better or currently enrolled; Credit for CSE 325 or CSE 421 only
CSE	**340**	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE Graduate students
CSE	**355**	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Syst Engr BSE or Computer Science BS students and have received a C or greater in CSE 310 OR CSE Graduate students
CSE	**360**	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS students and have received a C or greater in CSE 220 or CSE 240 OR CSE Graduate students; or BMI BS (ESBMIBS) students and have received a C or greater in CSE 310
CSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	**408**	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS students CSE 310 with C or better
CSE	**412**	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: - Computer Systems Engr BSE, Computer Science BS student, or Biomedical Informatics student; CSE 310 with a C or better
CSE	**414**	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 412 with a C or better or currently enrolled
CSE	**420**	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: BSE Computer Syst Engr or BS Computer Science students; CSE 230 or EEE 230 or CSE 330, and CSE 310 with C or better
CSE	**423**	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 320, 325, 360 with a C or better; May not enroll if received a C or better in CSE 461 or 485
CSE	**424**	Systems Capstone Project II	Continuation of capstone project started in CSE 423. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science or Computer Systems Engr BS or BSE students; Must have received a C or greater or be currently enrolled in CSE 423
CSE	**430**	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230 with a C or better; CSE 310 with a C or better OR Graduate CSE student
CSE	**432**	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 430 with C or better
CSE	**434**	Computer Networks	Distributed computing paradigms and technologies, distributed system architectures and design patterns, frameworks for development of distributed software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 230 or EEE 230, or CSE 330 and CSE310 with C or better

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CSE	**438**	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 325 with C or better
CSE	**440**	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 310 with C or better
CSE	**445**	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 360 or be currently enrolled.
CSE	**450**	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**457**	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering or Computer Science - BS students and a grade of C or better in CSE 355 or be currently enrolled.
CSE	**459**	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engr BSE or Computer Science BS student; CSE 355 with a C or better or currently enrolled.
CSE	**460**	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 360 with a C or better or currently enrolled.
CSE	**461**	Software Engineering Project I	First of two-course software team-development sequence. Planning, management, design, and implementation using object-oriented technology, CASE tools, CMM-level-5 guidelines. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Systems Engineering or Computer Science BS student; Pre-or Co-requisite: CSE 460 (with C or better if completed); May not enroll in CSE 461 if received C or better in CSE 423 or CSE 485
CSE	**462**	Software Engineering Project II	Second of two-course software team-development sequence. Software evolution, maintenance, reengineering, reverse engineering, component-based development, and outsourcing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 461 with C or better
CSE	**463**	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS student; CSE 310 with a C or better or currently enrolled.
CSE	**465**	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Information Systems, Computer Systems Engineering BSE, Computer Science BS or Industrial Engineering BSE students and a grade of C or better in CIS 300 or CSE 360 or IEE 305 or currently enrolled
CSE	**466**	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	**467**	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science or Computer Systems Engineering students; CSE 310 completed with a C or better
CSE	**468**	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 with C or better
CSE	**470**	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE or Computer Science BS students and a grade of C or better or currently enrolled in CSE 310 AND a grade of D or better in MAT 342 or 343 or currently enrolled.
CSE	**471**	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 AND CSE 240 or be currently enrolled.
CSE	**476**	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 310 or be currently enrolled.
CSE	**477**	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Systems & Engineering BSE or Computer Science BS students; MAT 343 (or MAT 342) with D or better
CSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	**485**	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-requisites: Computer Science & Engineering BSE or BS students; CSE 310 and CSE 360 with C or better; may not enroll if received a C or better in CSE 423 or CSE 461
CSE	**486**	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.	L	Pre-Requisites: Computer Systems Engineering BSE, Computer Science - BS students and a grade of C or better in CSE 485 or currently enrolled.
CSE	**492**	Honors Directed Study		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Pre-Requisites: Must be an honors student.

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CSE	**493**	Honors Thesis		Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Pre-requisites: Must be an honor student.
CSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering or Computer Science - BS student and cumulative GPA must be greater than or equal to 2.50 OR Graduate Engineering students.
CSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	**509**	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, MPEG 1, 2, 4, and 7 standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisite: Computer Science Engineering graduate student
CSE	**510**	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**511**	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science graduate student
CSE	**512**	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**515**	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**520**	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**522**	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science graduate student
CSE	**530**	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science graduate student
CSE	**531**	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**534**	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**535**	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**536**	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**539**	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**543**	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**545**	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Computer Science graduate student
CSE	**548**	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science graduate student

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CSE	**550**	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**552**	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In may applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science graduate student
CSE	**555**	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**561**	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**563**	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**564**	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**565**	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**566**	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**570**	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**571**	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**572**	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**573**	Advanced Computer Graphics II	Modeling of natural phenomena: terrain, clouds, fire, water, and trees. Particle systems, deformation of solids, antialiasing, and volume visualization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**574**	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**576**	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**577**	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**578**	Advanced Geometric Modeling II	Advanced concepts of geometric modeling: Bezier curves, B-spline curves, blossoming, polygons, geometric algorithms, shape analysis. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3.		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student

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CSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Must be a Computer Science Engineering graduate student
CSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisites: Must be a Computer Science or Computer Science Engineering graduate student
CSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CSE	**100**	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Office of the Provost	Office of the Provost	3.	CS	
CSE	**180**	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
CST	**100**	Object-Oriented Software Development I	Basic concepts of object-oriented analysis, design, and programming using Java. Basic Java variables, expressions, arrays, statements, methods, and classes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**150**	Digital Systems	Number systems and arithmetic, Boolean algebra, combinational logic, K-maps, ROMs, PLAs, flip-flops, synchronous sequential circuits, introduction to HDL.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites: CST 100 or EGR 101 (or be co-enrolled in CST 100); MAT 117 or higher
CST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-3		
CST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**200**	Object-Oriented Software Development II	Object-oriented programming and design; information hiding; inheritance and run-time binding; polymorphism; recursion; GUI programming. Introduces software engineering concepts, including software development life cycles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 100 with a D or better
CST	**201**	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre/Co-requisite: CST 200
CST	**220**	Programming Languages for Technology with C/C++ and Scripting	Programming language design and implementation concepts through programming C/C++ and scripting; language paradigms, compilation and interpretation, types, run-time management, data control, pointers, inheritance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:CST 150, and CST 200 with a D grade or better
CST	**230**	Applied Data Structures	Applications of data structures: strings, stacks, queues, trees, hash tables. Time/space complexity, recursion, searching, and sorting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 200 and MAT 243 with D or better

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CST	**250**	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 100 and CST 150; Co-requisite: CST 251
CST	**251**	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**256**	C Programming for Engineering Technology	Applied and practical problem solving using the C programming language.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**298**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**315**	Software Enterprise I: Tools and Process	Introduces tools and techniques used in software enterprise/development, including coding, design, testing, configuration management, and personal process management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites:Completed CST 200 and CST 230 with a D or better
CST	**316**	Software Enterprise II: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**335**	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 230; MAT 243
CST	**350**	Digital Systems Design with Verilog	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET150 or CST150 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**359**	Internet Networking Protocol	Computer networking for application, transmission control and network layers using the Internet protocols as a model; reliability and security.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**364**	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must have earned D or greater in CET 200 or CST 200 or be currently enrolled AND earned D or greater in CET 354 or CST 354 or be currently enrolled OR must be Technology Science BAS, MS, MSTECH, or Master Computing Studies student
CST	**383**	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites:Must be Technology Science non-degree or BS student AND earned C or greater in CET 100, CET256, CST100, or CST256 or currently enrolled OR must be Technology Science BAS, MS, MSTECH, Master Computing Studies, or Engineering PHD student
CST	**386**	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Technology and Innovation or Fulton School of Engineering undergraduate student; CST 100 or CST 256 with C or better; CST 250/251 with C or better or Technology and Innovation graduate student
CST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**415**	Software Enterprise III: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	L	Pre-requisites: CST 315; ENG 101(or ENG 105, ENG 107 or ENG 111)
CST	**416**	Software Enterprise IV: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 415; ENG 102, 105, 108 or 112
CST	**420**	Foundations of Distributed Web-Based Applications in Java	Principles underlying design and implementation of distributed software components; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisites: Must be Technology Science BAS/BS/MS/MSTECH student AND earned a C or greater in CET 230 or CST 230 or be currently enrolled AND earned a D or greater in CET 386 OR CST 386 or be currently enrolled
CST	**425**	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**427**	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**428**	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**433**	Database Technology	Introduces database technologies and DBMS, data models, and languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: CST 230 and MAT 243 completed with a C or better or currently enrolled
CST	**441**	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420 with C or better
CST	**452**	Advanced Digital Systems Design with VHDL	Uses VHDL to design components of computers and digital systems. Design examples include RISC processor and ALU, memory controller, I/O controller. Requires design projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	**456**	Microcomputer Systems Interfacing	Programming using BIOS and DOS routines. Disk operations, TSR routines, and device drivers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: CST 364 and CST 386 or graduate student in Technology & Innovation
CST	**457**	Advanced Assembly Language Applications	Applies 32-bit assembly language programming using advanced assembler techniques and interfacing to high-level languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CST 354 with D or better; CET 354 with D or better OR Technology and Innovation or Fulton Engineering graduate student
CST	**458**	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**473**	Digital/Data Communications	Signals, distortion, noise, and error detection/correction. Transmission and systems design. Interface techniques and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		
CST	**481**	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**482**	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
CST	**483**	Cyber Security Capstone Project	Applies security techniques to a real-world situation. Development of security policy, risk solutions, and incident response facilities.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	2.		
CST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		
CST	**486**	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; CET383 or CST 383 with C or better; CET 350 or CST 350 with C or better OR Technology and Innovation or Fulton Engineering Graduate student
CST	**488**	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Technology and Innovation or Fulton School of Engineering; CST 383 (CET 383) with C or better; CST 386 (CET 386) with C or better or Technology and Innovation graduate student
CST	**489**	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: Technology and Innovation BS/BAS student or BSE student; CET 383 or CST 383; CST 359 (or CST 459 or CET 459) or Graduate Non-degree or MSTECH
CST	**490**	Reading and Conference		N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
CST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
CST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
CST	**496**	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		
CST	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-6		
CST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-7		Pre-requisite: Undergraduate Technology and Innovation or Fulton Engineering student; Min GPA 2.25; OR Technology and Innovation or Fulton Engineering Graduate student
CST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-3		
CST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**520**	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequistes: CET364 or CST364 OR Graduate, Non-Degree, or Post Bacc student AND College of Engineering & Applied Sciences or School of Technology
CST	**533**	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
CST	**540**	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: CST 420
CST	**552**	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
CST	**554**	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)

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CST	**556**	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 420
CST	**557**	Embedded Applications Development	Current trends in embedded system development using C, assembly, and special purpose hardware. Development versus target environment issues.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**566**	Principles and Practices of Operating Systems	Principles and practices of operating systems: virtual memory systems, I/O devices and systems, file systems and organization, and other topics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**576**	Embedded Real-Time Programming	Topics in real-time embedded operating systems such as synchronization, communications, file systems, and memory sharing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
CST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**586**	Digital Modeling Techniques	Digital system modeling and simulation using hardware description languages.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
CST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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CST	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
CST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**492**	Honors Directed Study	Consult with an honors advisor before enrolling. May be repeated for credit.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DAH	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DAH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAH	**495**	Theory and Methods of Dance Research	Examines modes of inquiry, data gathering techniques, data analysis and representation, prospectus design, and presentation style for dance research studies. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DAH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**502**	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student

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DAH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DAN	**122**	Rythmic Theory for Dance II		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**130**	Dance	Introduces styles and forms of dance; ballet, modern, jazz, tap, ballroom, ethnic. Fee.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**321**	Music Literature for Dance	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN222 and MUS340 with a grade of C or greater or be currently enrolled
DAN	**330**	Dance	Advanced levels. Continuation of DAN 230. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**351**	Methods of Teaching Ballet	Analysis and acquisition of teaching techniques and materials for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**352**	Dance Education Theory	Motivation; learning; assessment; historical, cultural, and social constructs; outreach; service; advocacy; curriculum development in dance education. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance major
DAN	**365**	Advanced Choreography	Investigation and practice of contemporary styles of choreography.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites:Must have completed DAN364 with a C or greater; must have completed DAN265 with a C or greater or be currently enrolled
DAN	**380**	Performance Studies Practicum	Focus on developing rehearsal skills and achieving performance excellence through the preparation of three completed works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DAN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**435**	Technique and Theory of Ballet	Study of professional advanced ballet technique with emphasis on preparation for performance. 4 hours weekly. May be repeated for credit.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DAN	**445**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement investigation, observation, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DAN	**471**	Dance Arizona Repertory Theatre	Preprofessional modern dance company, emphasizing outreach and performance. Opportunity to work with guest artists and community schools and organizations. May be repeated for credit. fee	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DAN	**472**	Concert Dance	Extensive preparation of repertory or new works created by experienced choreographers. Simulates dance company experience, culminating in performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DAN	**496**	Senior Dance Education Capstone	Original research that integrates dance and education. Includes production of written document and public presentation. Fall semester must be completed before spring registration. Must be repeated for a total of 4 semester hours.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DAN 350 with C or better; DAN 352 with C or better; DAN 354 with C or better; DAN 356 with C or better
DAN	**510**	Dance Production	Theory of costuming, lighting, makeup, scenery, and sound as related to dance performance. May be repeated once for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAN	**522**	Sound Design for Dance	Focus on digital recording/editing of audio compositions for choreographic and video projects. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1-2		Pre-requisite: Must have completed DAN 521 or be co-enrolled in DAN 521
DAN	**545**	Laban Movement Analysis	Theory and practice of Laban movement analysis and Bartenieff fundamentals through movement integration, observation, critical research, notation, and analysis.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DAN	**551**	Graduate Dance Pedagogy: Ballet	Advanced analysis of teaching techniques for ballet.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**100**	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**110**	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		

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DCE	**111**	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**112**	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**113**	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**114**	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**116**	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**117**	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**118**	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**120**	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**121**	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**122**	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**123**	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**124**	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**125**	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**126**	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**130**	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major
DCE	**131**	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance student; DCE 130 with C or better
DCE	**134**	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**135**	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**160**	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**161**	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	**170**	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance major
DCE	**171**	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance majors
DCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		

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DCE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**201**	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU & G	
DCE	**210**	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	**211**	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	**216**	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	**220**	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	**221**	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		
DCE	**222**	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	**223**	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	**224**	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	**225**	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	**230**	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	**234**	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student; DCE 234 with C or better
DCE	**235**	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**260**	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major; DCE 161 with C or better
DCE	**261**	Second-Year Creative Practices II	Continues developing students' awareness of their own creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major; DCE 260 with C or better
DCE	**262**	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**263**	Rhythmic Theory for Dance II	Continuation of DAN 221 with an emphasis on small group/movement projects in relation to musical time and structure. CD-ROM work included. Students with rhythmic theory transfer credit may meet the enrollment requirements by passing a proficiency exam. Please contact the instructor of the course for more information.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**270**	Second-Year Seminar I	Theory and practice of lighting, scenery, sound, and stage management for dance production. Labs cover all areas of production.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites: Dance Majors only; DCE 171, First-Year Seminar or DCE 194: First-Year Seminar
DCE	**271**	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance major; DCE 270 with a Y
DCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**300**	Moving Histories	In-depth study of the history of Western dance in Europe and America. Students learn about various ways of conducting research into dance history, including interviewing, researching using primary resources and performing scholarship. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	HU	Pre-requisite: ENG 101, 105 or 107 with C or better
DCE	**301**	Meaning in Motion	Critical inquiry into the nature of dance through the lens of dance theory. Covers philosophical and theoretical issues raised by the study of dance in relation to specific historical and global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
DCE	**302**	Cross-Cultural Dance Studies	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	(L or HU) & G	Pre-reqs: DAH 201 or DCE 201 with C or better; ENG 101 and ENG 102 OR ENG 105 with C or better

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DCE	**324**	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)
DCE	**325**	Latin/Salsa III	Refines dances learned in the intermediate level of major Latin dances, including salsa, cha cha, rumba, meringue, bachata, and samba. Prepares students to have a more advanced command of the complex rhythms and figures used in the major Latin dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: DCE 225 or DAN 294 (Latin/Salsa II)
DCE	**334**	Postmodern Contemporary III	Integrates dance theory and practices of postmodern contemporary dance technique. Refines movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**335**	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**340**	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.	CS	Pre-requisite: ART 112 or Dance BFA, Dance Minor or BIS: Dance concentration student
DCE	**350**	Dance for the Classroom Teacher	Develops teaching methodology for implementation of dance curriculum in K-12 classrooms.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		
DCE	**354**	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**356**	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance major
DCE	**370**	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 271 with a Y
DCE	**371**	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**434**	Technique and Theory of Modern Dance	Preparation in the performance and comprehension of professional-level modern dance technique. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance BFA student
DCE	**437**	Dance Kinesiology	Principles of kinesiology applied to dance movement, including identification of muscular imbalances, inherited anatomical differences, and pathomechanics in dance technique.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Dance BFA student; BIO 201 with a D or better
DCE	**438**	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	**460**	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance BFA student
DCE	**461**	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance students; DCE 460 with C or better
DCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		
DCE	**492**	Honors Directed Study		N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-6		
DCE	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Dance T	1-6	L	Pre-requisites: Must be an Honors student
DCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		
DCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-7		

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DCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-3		
DCE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**501**	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**530**	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**534**	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student
DCE	**535**	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: MFA Dance student
DCE	**538**	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisite: MFA Dance student
DCE	**540**	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**543**	Sound Design for Dance	Audio mixing for analog/digital recording and editing. fee	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	2.		Pre-requisite: Dance majors
DCE	**554**	Graduate Dance Pedagogy	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**560**	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**561**	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student; DCE 560
DCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-4		Pre-requisites:Must be a Graduate Student
DCE	**634**	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly. Fee.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: Dance Graduate student
DCE	**660**	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Dance T	3.		Pre-requisite: MFA Dance student
DCE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Dance T	1-12		Pre-requisites:Must be a Graduate Student
DCE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Dance T	1.		Pre-requisites:Must be a Graduate Student
DCI	**510**	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**511**	Establishing Effective Teaching Practice	Helps beginning teachers establish and strengthen best practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**512**	Developing Strategies for Teaching Practice	Helps beginning teachers refine management strategies and instructional methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**520**	Teaching Standards Applied to Professional Practice	Develops teacher skills and self-reflective practices to assess instruction and document and achieve professional growth in teaching standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**521**	Reflective Practice in Teaching Standards	Teachers apply reflective practices to develop professional presentation portfolios.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**530**	Establish a Mentoring Partnership	Prepares veteran educators for mentoring. Mentors collaborate, reflect on their practice, and become teacher leaders through professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**531**	Analyzing and Planning for Professional Growth through Mentoring	Refines strategies for assessing instruction and provides collegial feedback.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: COE 501or DCI 510 with B or better
DCI	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**701**	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**702**	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**703**	Research in Teacher Development and Leadership	Examines research in teacher education and development from preservice through in-service. Students participate in the review of research related to broad themes within the recent literature. Strands/themes of investigation include a brief review of the history of teacher education, teacher development, professional development and teacher leadership, teacher evaluation, qualitative and quantitative research in teacher education, reform in teacher education, including recent policies and politics and other issues.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**704**	Adult Learning Theory and Practice	Explores the multiple dimensions of learning in adulthood, including the social contexts of learning, and cognitive and developmental aspects of learning. Focuses on the experience and practice of adult learning, and examines the various theories attempting to explain how adults learn.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**705**	Teacher Leadership Theory and Professional Practice	Teacher leaders analyze leadership skills as they reflect on their own practice and professional development experience. They process knowledge of how to effectively promote positive practices among teachers at varied stages in their careers. Teacher leaders are involved in scholarly inquiry and discourse by means of leadership institutes, peer collaboration, reflective questioning and individual research. Teacher leaders also develop the perspective of the teacher as researcher as they read and critically evaluate published research related to teacher leadership in professional and academic literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DCI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
DCI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**451**	Design Research and Educational Gaming Practicum	Principles of design research as applied to educational games. Includes implementation of a design research project.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: RDG 440 with C or better; EDT 329 with C or better
DCI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
DCI	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
DCI	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
DCI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
DCI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
DNP	**600**	Research Methods	Course on research methods in a specific discipline.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**601**	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**602**	Principles of Research Methods and Evidence-based Practice	Examines processes of scientific inquiry and their application to generating knowledge for and refining nursing practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**603**	Evaluating and Applying Evidence in Healthcare Outcomes	Examines the role of inquiry and innovation in scientific, theoretical, and practical underpinnings of healthcare improvement.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisite: Graduate Nursing Program student
DNP	**604**	Advanced Human Pathophysiology Core	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**605**	Advanced Health Assessment Core	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**607**	Advanced Human Pathophysiology Women's Health	Didactic course for women's health nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**608**	Advanced Pharmacotherapeutics Core	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: Graduate Nursing Program, Doctor of Nursing Practice.
DNP	**609**	Advanced Practice Nursing Role I	First of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: Nursing Graduate Program
DNP	**610**	Advanced Practice Nursing Role II	Second of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP 609 with B or better
DNP	**611**	Advanced Health Assessment of Women Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of women across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 605

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DNP	**612**	Applied Pharmacotherapeutics for Women	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for women.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 608
DNP	**613**	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	**614**	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	**615**	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	**616**	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	**617**	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	**618**	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	**620**	Advanced Human Pathophysiology Adult	Didactic course for adult nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 604
DNP	**621**	Advanced Health Assessment of Adults Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of adults and adolescents.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 605
DNP	**622**	Applied Pharmacotherapeutics for Adults/Geriatrics	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for adults and geriatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 608
DNP	**623**	Adult Health Promotion	Introduces adult health promotion and disease prevention, emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 624
DNP	**624**	Adult Health Practicum I	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 623
DNP	**625**	Management of Common Problems in Adults	Includes theory/research that guides the management/maintenance of adults with chronic health alterations. Emphasizes psychophysiological interrelationships of illnesses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 626
DNP	**626**	Adult Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 625
DNP	**627**	Management of Complex Health Problems in Adults	Didactic course designed to complement DNP 628. Focus on application of EBP in care of adults with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requiste: DNP 628
DNP	**628**	Adult Health Practicum III	Clinical practicum designed to complement DNP 627. Focuses on application of EBP in care of adults with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Nurse Practitioner); Co-requisite: DNP 627
DNP	**630**	Advanced Human Pathophysiology Family	Didactic course for family nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 604
DNP	**631**	Advanced Health Assessment for Family Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 605
DNP	**632**	Applied Pharmacotherapeutics for the Family	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 608
DNP	**633**	Family Health Promotion in Primary Care I	First didactic role specialty course. Focuses on concepts and strategies to promote, manage, and maintain health of child, adult, and family.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	**634**	Family Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	**635**	Management of Common Family Problems in Primary Care II	Second didactic role specialty course utilizing knowledge from previous courses to formulate therapeutic promotion, management, and maintenance for individuals across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	**636**	Family Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	**637**	Management of Complex and Chronic Family Problems in Primary Care III	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan for the Family Nurse Practitioner role specialty.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638

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DNP	**638**	Family Health Practicum III	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	**640**	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 604
DNP	**641**	Advanced Health Assessment for Children Lab/Practicum	Skill-based course of advanced health assessment skills, including history-taking strategies and the physical, functional, developmental, psychosocial, and comprehensive health assessment of children from birth to age 21 years.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 605
DNP	**642**	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for family nurse practitioners.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 608
DNP	**643**	Developmentally Based Care of the Well Child	Focuses on current practices, research, and issues related to health promotion and disease prevention for children and adolescents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	**644**	Well Child Advanced Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	**645**	Management of Common Problems in Pediatric Primary Care	Focuses on concepts, theories, and research as a basis for strategies related to management of illness and health maintenance for children.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	**646**	Advanced Practicum II in Pediatric Primary Care	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645
DNP	**647**	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on strategies for health maintenance and management of childhood acute illnesses, complex and chronic illnesses, and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	**648**	Management of Complex and Chronic Problems in Pediatric Primary Care-Practicum III	Clinical course assists students in developing advanced clinical skills in pediatric health promotion and advanced-practice clinical decision making; includes the diagnosis and treatment of complex and chronic problems in pediatric primary care.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647
DNP	**650**	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 604
DNP	**651**	Advanced Health Assessment of Neonates Lab/Practicum	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 605
DNP	**652**	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**653**	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	**654**	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	**655**	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	**656**	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration. Fee.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	**657**	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	**658**	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	**659**	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	**660**	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiolgy and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**662**	Advanced Mental Health Assessment Across the Lifespan Lab/Practicum	Focuses on integration of knowledge and development of skills in assessment of psychiatric disorders occurring in children, adolescents, and adults.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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DNP	**663**	Mental Health Promotion in Adults	Analyzes issues, theories, and research in restoration and promotion of mental health. Emphasizes developing conceptual framework for psychiatric nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 664
DNP	**664**	Adult Psychiatric Mental Health Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 663
DNP	**665**	Management of Common Mental Health Problems in Adults	Focuses on development of theoretical basis for intervention and a knowledge base for collaboration and consultation in the mental health area.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Corequisite: DNP 666
DNP	**666**	Adult Psychiatric Mental Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 665
DNP	**667**	Management of Complex and Chronic Mental Health Problems in Adults	Focuses on modalities of evidence-based treatment with adolescents and adults with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 668
DNP	**668**	Psychiatric Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic adolescent and adult mental health disorders.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Adult Psychiatric Mental Health Nurse Practitioner); Co-requisite: DNP 667
DNP	**671**	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**672**	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications as a treatment for children and adolescents with mental health disorders.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	**673**	Mental Health Promotion in Children, Adolescents, Adults, and Families Across the Lifespan	Focuses on evidence-based interventions to promote the mental health of children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: DNP Advanced Nursing Practice (Child and Family Psychology Nurse Practioner), (Child & Adolescent Mental Health) or Child and Family Mental Heath Nurse Practioner; DNP 671; DNP 672; Co-requisite: DNP 674
DNP	**674**	Child and Family Mental Health Practicum II	Clinical experiences to become skilled in assessment and evidence-based individual psychotherapy of common mental health disorders in children, adolescents, adults and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 671; DNP 672; Co-requisite: DNP 673
DNP	**675**	Management of Common Mental Health Problems in Children, Adolescents, and Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with common psychopathology.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Prerequisite: Graduate Nursing student; DNP 673; Co-requisite: DNP 676
DNP	**676**	Child and Family Mental Health Practicum I	Clinical experiences to become skilled in assessment and evidence-based management of common mental health disorders in children, adolescents, and families.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Prerequisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; Co requisite: DNP 675
DNP	**677**	Management of Complex/Chronic Mntl Hlth Problems in Children, Adolescents&Adults Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate Nursing student; DNP 673; DNP 675; Co-requisite: DNP 678
DNP	**678**	Child and Family Mental Health Practicum III	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner; DNP 674; DNP 676;Co-requisite: DNP 677
DNP	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
DNP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**685**	Geriatric Health Promotion Practicum	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Graduate students only
DNP	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Nursing and Healthcare Innovation PhD or DNP student. Pre/Co-requisite: DNP 682 or NUR 682. credit is allowed for only DNP or NUR 686

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DNP	**687**	Geriatric Health Management Practicum	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Graduate students only
DNP	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**689**	Geriatric Chronic Disease and Syndrome Management Practicum	Diagnosis, management and application of advanced knowledge and skills for comprehensive primary care and care of older adults with geriatric chronic diseases and syndromes.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Graduate students only
DNP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**696**	Advanced Human Pathophysiology Older Adults	Didactic course for gerontological/geriatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics learned in the core pathophysiology course.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DNP	**704**	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student
DNP	**705**	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	**708**	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**709**	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**710**	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites:One of the following DNP concentrations:Adv Nurs Pract(AduNurPractnr); Adv Nur Prc (Child/Fam Psy NP); Adv Nursing Practice;Adv Nur Prac (Family NP);Adv Nur Prac (Neonatal NP); Adv Nur Prac (PediatricNP); AdvNurPracAdl
DNP	**711**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Doctor of Nursing Practice student
DNP	**712**	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DSC	**101**	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & G	
DSC	**180**	Athena Design Success	Facilitates academic success for first-year College of Design students in the Athena program through developmental, educational, and professional experiences.	N	DIS	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
DSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**236**	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
DSC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		

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DSC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
DSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
DSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
DSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
DSC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	**501**	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**520**	Contemporary Design Issues	Projected applications in design production, planning, and decision-making processes.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**525**	Design Methodologies	Practical exercises and studies in problem-solving strategies; problem definition and supporting theory for the designer. Fee.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**558**	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Master of Science in Design student
DSC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student

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DSC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
DSC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EA	**555**	Sch-Plant-Plan-Main		Y	LEC	Y	CNV	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
EAC	**426**	Professional Knowledge in Early Childhood Education	Explores issues related to professional knowledge, including disciplinary instruction and the impact of the community on students¿ learning.	N	SEM	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
EAC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
ECD	**501**	Interprofessional and Family Collaboration	Explores trends and practices, educationally appropriate instruction and resource materials, methods and strategies in early childhood education. Discusses history of the field, theory, contemporary issues and controversies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**505**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**520**	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**522**	Developmental Social Experiences in Early Childhood Education	Materials, techniques, aesthetic expression, creative activities, and values in the integrated curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**527**	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**544**	Play-Based Education in Inclusive Settings	Theories of play and the educational implications of each in an early childhood/elementary inclusive curriculum for best teaching practices. Practical applications for the primary grades of the elementary and preschool setting in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**548**	Childhood Studies and Social and Political Environments	Examines the emergence of interdisciplinary/transdisciplinary childhood studies from historical, social, and political contexts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**549**	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**555**	Contemporary Practices in Early Childhood	Trends and practices, instructional and resource materials, and methods and techniques in early childhood education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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ECD	**565**	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
ECD	**571**	Pre-K Student Teaching	Supervised field experience consisting of 160 total hours of work with children between the ages of birth to age 4.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	4.		Pre-requisite: Graduate students only
ECD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**601**	Theories and Issues in Early Childhood Education	Current theories and issues in early childhood education. Presents issues of early childhood best practices, policy, theory, research, and evaluation that are of significance to the early childhood professional. Highlights building on the child development conceptual framework as related to theory and practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
ECD	**733**	Social and Emotional Development	Inquiry into the social and emotional development dynamics in children, such as peer relationships, self-concept, and parenting processes, with implications for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	**503**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**541**	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth throught eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children's diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**570**	Pre-K Internship	Field experience consisting of 30 total hours of work with children between the ages of birth-age 4. Required for Arizona Dept. of Education Early Childhood Endorsement.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECD	**578**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECD	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECD	**211**	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork. May be repeated once for credit.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
ECD	**220**	Nutrition, Health, and Safety for Young Children	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Students are required to have first aid and CPR certification, which may require a fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
ECD	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**301**	Technology, Media, and Community-Based Education for Young Children	Examines technology, media, toys, and community-based educational opportunities to support the education of three- to eight-year-old children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**302**	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**312**	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**313**	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**315**	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**316**	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**321**	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**323**	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**324**	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**341**	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**355**	Accommodating Instruction in Early Childhood Education	Identifying and accommodating learners with special needs, including classroom adaptations in instruction and assessment, for pre-K-3 classroom environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
ECD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**396**	Field Experience: Community-Based Early Childhood Education Setting	Observation in classrooms and individual and small group instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**397**	Field Experience II	Instruction, observation, and management of small groups and the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**402**	Integrated Curriculum and Assessment: Math and Science	Emphasizes developmentally appropriate educational strategies and instructional techniques in teaching mathematics and science to children in preschool through 3rd grade, within an integrated curriculum approach.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses

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ECD	**403**	Educational Environments: Preschool/Kindergarten/Primary Grades	Focuses on interactions between young learners and the physical and social environments encountered in preschool, kindergarten, and primary settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**405**	Practicum in Teaching Reading and Language Arts in Early Childhood	Supervised experience teaching reading and language arts at the preschool, kindergarten, and primary-grade (1-3) levels. Developmentally appropriate strategies to promote young children's speaking, listening, reading, and writing abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**406**	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**410**	Science Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood science; age-appropriate standards; active investigation of science concepts; inquiry and collaborative learning; connections between science and other subject areas. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**412**	Mathematics Curriculum, Instruction and Assessment	Content, instructional strategies, and assessment in early childhood mathematics; age-appropriate standards; active investigation of mathematics concepts and ideas; connections between mathematics and other subject areas.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**413**	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**415**	Practicum - Literacy Curriculum, Instruction, and Assessment, K-3	Supervised experience teaching reading and language arts in the primary grades.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**416**	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**470**	Early Childhood Education Student Teaching Seminar	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	DIS	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**476**	Integrated Curriculum: Birth-Pre K	Introduction to teaching children birth through pre-K, including classroom organization, curriculum, and professional relationships.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**477**	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	4-6		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**478**	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	5-8		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**479**	Capstone Seminar in Early Childhood Education	Reflective, experienced-based integration of theory and practice; professional development for early childhood teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**481**	Issues and Practices in Early Childhood Education	Stakeholder analysis of teacher education experiences applicable to preparation that leads to increased educational opportunity and success for diverse children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**493**	Honors Thesis	Honors Thesis	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
ECD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
ECD	**496**	Field Experience III	Instruction and management of small groups and substantial work with the whole class. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
ECD	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		

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ECD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
ECN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
ECN	**201**	Economic Issues and Analysis	Introduces tools used in basic economic analyses, emphasizing application to contemporary national and international issues. Not open to students with credit in ECN 211 or 212	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisite: Not open to students with credit in ECN 211, ECN 212, 213, or ECN 214
ECN	**211**	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**212**	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	
ECN	**213**	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 210, MAT 211, MAT 270 or MAT 271.
ECN	**214**	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: Must be an Honors student; Must have completed one of the following courses with a grade of C or better: MAT 211 or MAT 271.
ECN	**221**	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: MAT 211 or MAT 271 with a C or better or currently enrolled
ECN	**231**	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must be an Honors student; Must have completed MAT 211 or MAT 271 with a grade of C or greater or be currently enrolled.
ECN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be an Honors Student; Must have completed one of the following courses with a grade of C or greater or co-enrolling: MAT 210, MAT 211, MAT 270, MAT 271 or MAT 272
ECN	**303**	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	**306**	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled. May not enroll if completed IBS 306 with a D or greater
ECN	**312**	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**313**	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	**315**	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**331**	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**335**	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre- or corequisites with grade of "C" or better: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271.
ECN	**345**	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with grade of C or better.
ECN	**355**	Economics of Healthcare	Uses economic tools and models to discuss and evaluate the American healthcare system. Applies standard concepts in microeconomics, macroeconomics, and public choice economics to the study of the evolution and the current state of the healthcare system and to the study of proposals for change. Focuses on the promise and problems of using economic tools in a historical, ethical, and cultural context to understand the current healthcare system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 211 or ECN 213, ECN 212 or ECN 214, and MAT 211 or MAT 271 with a grade of "C" or better.

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ECN	**360**	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**365**	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**382**	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with a grade of C or greater or be currently enrolled.
ECN	**404**	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-requisites: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**410**	Applied Business Forecasting	Applies forecasting techniques in business and institutional environments. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: ECN 221 or STP 226, AND ECN 214 or ECN 312/314 with a grade of C or greater.
ECN	**413**	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**414**	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Honors student; ECN 213 or 313, AND ECN 214 or 312/314 with a grade of C or greater.
ECN	**416**	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 314 with a grade of C or greater or be currently enrolled; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**421**	Labor Economics	Origins of labor movement, analysis of labor unions, labor markets, collective bargaining, and current policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Prerequisites: With a grade of "C" or better: ECN 214 (or 312). Pre- or corequisite: ECN 213 (or 313).
ECN	**425**	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314, AND ECN 221, ECN 231 or STP 226 with a grade of C or greater
ECN	**436**	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**438**	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB & G	Pre-reqs: ECN 213 or ECN 313 with a grade of C or greater or be currently enrolled
ECN	**441**	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	SB	Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**445**	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3.		Prerequisites: ECN 214 or 312 or 314; MAT 211 or 271 with grade of C or better; co-requisite or pre-requisite: ECN 213 or 313.
ECN	**450**	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**453**	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**470**	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater
ECN	**475**	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	L	Pre-reqs: ECN 213 or 313 AND ECN 214 or ECN 312/314 with C or greater; senior standing.
ECN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Min 3.0 ASU cum GPA; ECN 213 or 313, and ECN 214 or 312/314 with a grade of C or greater.
ECN	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Honors student; W. P. Carey BS or BA student or non degree seeking W.P. Carey student; ECN 213 or 313 AND ECN 214 or 314 with a grade of C or better.
ECN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with a grade of C or greater; Co- or pre-requisite: ECN 213 or ECN 313
ECN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: Must have completed ECN 313and ECN 314 with a grade of C or greater or be currently enrolled

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ECN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	**501**	Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**502**	Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	**503**	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a MBA degree program student
ECN	**510**	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: Must be a W.P. Carey Graduate degree seeking student
ECN	**525**	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:MAT 210 with a grade of D or better or currently enrolled
ECN	**527**	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**530**	Experimental Design	Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate Students only (degree and non-degree seeking)
ECN	**535**	Multivariate Methods	Advanced statistical methods used in business research. Multivariate analysis of association and interdependence.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites:ECN 525 completed with a D or better, or currently enrolled
ECN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student
ECN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 712 and ECN 714 with a grade greater than a C
ECN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey Graduste degree seeking student

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ECN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**711**	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**712**	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**713**	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**714**	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**715**	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 with a grade of C or greater; Must have completed ECN 713 with a grade greater than a C
ECN	**716**	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 714 with a grade of C or greater; Must have completed ECN 712 with a grade greater than a C
ECN	**717**	International Macroeconomics	Intertemproal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**721**	Labor Economics	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**722**	The Aggregate Labor Market	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**725**	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**726**	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 725 with a grade better than a C
ECN	**727**	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater;
ECN	**736**	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**738**	International Finance	Foreign exchange market, balance of payments, and international financial institutions and arrangements; theory and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**741**	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: W.P. Carey Graduate degree-seeking students only; Must have completed ECN 712 with a grade of B or greater; Co-requisite: ECN 714
ECN	**753**	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 713 and ECN 714 with a grade of C or greater
ECN	**760**	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student; Must have completed ECN 711 and ECN 712 with a grade greater than a C; Co-requisites: ECN 713 and ECN 714
ECN	**770**	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics. Topics include measure theory, probability theory, and mathematical statistics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**784**	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ECN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
ECN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ECT	**479**	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
EDA	**501**	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**511**	School Law	Interpreting state and federal law and policy in school settings. Includes statutory authority for administrators, liability, constitutional rights, law, and ethics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**515**	Administration and Technology in Learning	Provides students with hands-on exposure to technology that assists with school improvement initiatives.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**526**	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**534**	Concepts of Learner-Centered Leadership	Principles, theories, attributes, and skills related to learner-centered leadership.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**544**	Public School Finance	Measures of ability, efforts, and educational need; capital outlay funding; tax revenues; federal, state, and local financing alternatives; major issues and trends in the financing of public education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**548**	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**555**	Educational Facility Planning	School building needs, educational planning for facilities, responsibilities of architects, duties of contractors, and equipping and furnishing of school buildings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**571**	School Business Management	Purchasing, budgeting, accounting, payroll management, auditing, financial reporting, insurance, and administration of nonteaching personnel and services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**573**	Human Resources Administration	Organization for human resources services; development of policy to govern the human resources function and its related processes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**576**	The School Principalship	Problem and lab approaches used to provide application of administrative activities of elementary and secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EDA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**611**	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**624**	Organizational Development and Management of Schools	Current organizational patterns for public schools. Emphasizes the organizations, human, and social dimensions on organizations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**645**	Leadership Development for Education Leaders	Principles, theories, attributes, and skills related to individual leadership development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**675**	Politics of Education	Uses social science theory and research to consider the political context of educational policy making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**676**	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**679**	Administration of Special Programs in Education	For personnel administering special educational services; responsibilities of superintendents, principals, supervisors, and directors for special education, student personnel, audiovisual, library science, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EDA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**711**	Administrative Leadership	Emphasizes research in leadership; application of research findings to administrative and supervisory functions in educational endeavors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**722**	Administration of Instructional Improvement	Recent research relating to administrative and supervisory responsibilities for the improvement of the educational program. Effective processes by administrators, supervisors, consultants, and coordinators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**723**	Diversity in Education for School Leaders	Discusses current issues and leadership strategies for meeting the needs of diverse student populations combating inequity and inequality in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-3		
EDA	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**512**	Critical Issues in Educational Leadership	Legal and ethical concepts of educational practices in federal and state laws affecting charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**514**	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**521**	Evaluation of Teaching Performance	In-depth analysis of legal basis of teacher appraisal, teacher competency, measurement of teacher performance, and application of performance appraisal systems.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EDA	**524**	Theory and Application of Educational Administration	History and development of public school administration in the United States; current organizational patterns for public education at local, intermediate, state, and national levels; current theoretical positions in educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**547**	Marketing and Community Relations for Educational Entrepreneurs	Strategic marketing and community relations concepts and their application, formulation, and execution in charter and independent schools and related services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**556**	Management and Human Resources for Educational Entrepreneurs	Entrepreneurial leadership and organization theory applied to managing human resources in competitive educational organizations by increasing the effectiveness of decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**557**	Facilities Planning for Educational Entrepreneurs	Legal and practical implications involved in designing or refurbishing charter school facilities to maximize space to facilitate student development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**558**	Financial Planning and Reporting for Educational Entrepreneurs	Financial planning and reporting concepts, requirements, and procedures for charter and independent schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**572**	School-Site Business and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**578**	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**634**	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**772**	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDA	**773**	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	Institute & Grad Sch Education	Dean, Mary Lou Fulton Teachers College	3.		
EDP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**302**	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		
EDP	**303**	Human Development	Selected aspects of child and adolescent development. Emphasizes possibilities for influence by teachers and parents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
EDP	**310**	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	SB	
EDP	**313**	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
EDP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**454**	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	
EDP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
EDP	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		

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EDP	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
EDP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
EDP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDP	**502**	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**503**	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**510**	Essentials of Classroom Learning	Theoretical and empirical foundations of learning in the classroom milieu. Critical exposure to research and method in instructional psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**513**	Child Development	Examines problems and achievements experienced by children growing up in a technological society. Emphasizes discovering the child's perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**514**	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**529**	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**530**	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**535**	Applied Behavior Analysis	Principles of conditioning as applied to behavior. Current research on the experimental analysis of behavior in educational psychology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**536**	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**540**	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**541**	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**542**	Research Methods in the Learning Sciences	Students read, design, and carry out original research in the learning sciences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be a Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student and completion of EDP 540 with a grade of C or better
EDP	**544**	Psychology of Reading	Alternate analyses of the reading process; designs and procedures for investigating instructional and noninstructional variables related to reading achievement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**545**	Higher-Order Processes in the Learning Sciences	Examines original research on induction, deduction, analogy and transfer, knowledge representation, and other issues in learning.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**550**	Introduction to Measurement in Education	Nature and types of educational measures. Critiquing and selecting appropriate measuring devices. Constructing measuring devices. Social controversies about tests.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**552**	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**554**	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**560**	Individual Intellectual Assessment	Issues in administration and interpretation of individual intelligence tests. Theoretical basis, ethical considerations, and diagnostic use of test results. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: School Psychology Ph.D or Counseling Psychology Ph.D

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EDP	**561**	Lab in Psychological Assessment	Lab experience in administration, scoring, and interpretation of individual intelligence tests.	N	LAB	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Co-enrolled in EDP 560
EDP	**562**	School Psychology: Ethics, Theory, and Practice	Provides information regarding the ethics, history, and theory of current school psychology practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**563**	Interventions in School Psychology	Examines case-based consultation and consultation research relevant to school psychology practice.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**564**	Academic Interventions	Skills-building course emphasizing academic interventions and outcome-based educational decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**566**	Diagnosis of Learning Difficulties	Clinical diagnosis of learning difficulties, emphasizing specific academic problems. Use and interpretation of diagnostic instruments in practical school situations. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDP 560 and 562 with a grade of B or better
EDP	**567**	School Psychological Services to Minority Students	Historical perspectives and major issues in psychological and academic assessment and interventions with minority school children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**568**	Diagnosis and Interventions for Children and Adolescents with Emotional Handicaps	Clinical diagnosis of emotional handicaps in children and adolescents with emphasis on interpretation of diagnostic instruments and designing appropriate interventions in school settings. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
EDP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**597**	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**651**	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of COE 503 with a grade of C or better
EDP	**652**	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	**654**	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	**523**	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDP	**311**	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3	SB	Pre-requisites: Admission to Professional Teacher Preparation Program.
EDP	**323**	Professional Development, Learning, and Motivation	Applies educational psychology principles in classrooms; strategies for building classroom community; learner-centered and intentional teaching; and proactive professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
EDT	**321**	Computer Literacy	Surveys the role of computers in business, industry, education, and personal life. Lab experience with word processing, spreadsheet, and presentation software as well as Internet research and the creation of a personal Web site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	

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EDT	**323**	Computer Applications	Introduces database design principles using Microsoft Access and general programming concepts using the Visual Basic.Net programming language.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	CS	Pre-requisites: EDT 321 or CSE 180 or any ACO, CIS, CSE, or CST course with a D or better or currently enrolled
EDT	**329**	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**405**	Presentation Technology for Multimedia	Explores multimedia hardware and software used in creating presentations for educational, corporate, and commercial applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**406**	Computer Graphics and Animation	Study and application of design and animation techniques for use in video or computer-based presentations.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**455**	Authoring Tools	Use of current authoring tools to design and deliver computer-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
EDT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
EDT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
EDT	**501**	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**502**	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**503**	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**504**	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**505**	Multimedia Presentation Techs	Explores the design of multimedia presentations and the utilization of tools and resources to effectively deliver those presentations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**506**	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**507**	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: EDT 501 with B or better
EDT	**511**	Technology Applications in Education	Integrates and evaluates emerging technologies into K-12 and adult teaching and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**520**	Educational Technology and Training	Applies educational technology to training and human performance systems in business, industry, and government; emphasizes trends and project management.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 with a grade of C or better
EDT	**523**	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**525**	Web Resources for Educators	Explores Web-based and distance learning applications for educators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**527**	Instructional Video Production	Design and production of instructional video.	N	LEL	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 503 with a grade of C or better
EDT	**528**	Development of Web-Based Instruction	Design and development of online instruction using advanced technologies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better

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EDT	**530**	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, 502, and EDT 503 with a grade of C or better
EDT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completion of EDT 501, EDT 502, and EDT 503 with a grade of C or better
EDT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Students who have credit for RDG 634, may not enroll in EDT 634
EDT	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**701**	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 501 and 502 with a grade of C or better
EDT	**703**	Research in Distance Education	Seminar with emphasis on research in telecommunications and distance education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: EDT 523 with a grade of C or better
EDT	**704**	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
EDT	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Completion of EDT 502 with a grade of C or better
EDT	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Completed EDT 501, EDT 502, and EDT 503 with a C or better
EDT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Completion of EDT 701 with a grade of C or better
EDT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	**524**	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisite: Practicing or licensed K-12 teacher
EDT	**545**	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**546**	Using Technologies for Presentations	Students create presentations appropriate for educational settings and electronic portfolios on CD-ROMs using scanners, digital/video cameras, and multimedia software. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**547**	Technology in Language Arts and Social Studies Education	Examines numerous ways technology is used to enhance teaching and learning in language arts and social studies classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**548**	Technology in Mathematics and Science Education	Examines numerous ways technology is used to enhance teaching and learning in mathematics and science classrooms.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**549**	Using the Internet and Case Studies to Solve Educational Problems	Provides a model of the use of distance education technologies.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**555**	Advanced Web Site Design and Development	Prepares technology leaders to design and create interactive school and district Web sites.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**556**	Managing School Information Systems	Applied course based on constructivist theory that examines the techniques and strategies of networking information systems within educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**575**	Critical Issues in Technology	Exploration and critical analysis of theoretical issues related to using technology in education. Students do literature reviews for EDT 593.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EDT	**180**	Computer Literacy	Introduces personal computer operations and their place in society. Problem-solving approaches using databases, spreadsheets, and word processing. Credit is allowed for only EDT 180 or 321.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	CS	Students may not sign up for EDT 180 who have received a C or better in EDT 321.
EED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**511**	Principles of Curriculum Development	Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of conceiving and effecting change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**526**	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**529**	Science in the Elementary School	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**537**	Mathematics in the Elementary School	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**538**	Teaching Social Studies with Literature	Develops the rationale, resources, and strategies for adopting a literature-based approach to social studies teaching in grades K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**581**	Diagnostic Practices in Mathematics	Specific skills in diagnosing and treating children's learning difficulties in mathematics. Includes practicum experiences, both on and off campus, in identifying strengths and weaknesses and initial remediation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**720**	Language in Education	Sociolinguistic seminar on language issues in education, including language acquisition, classroom interaction, language attitudes, relation language, and class-gender ethnicity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**730**	Discourse Analysis in Education	Surveys issues in and approaches to discourse analysis in educational research, with focus on students' projects using discourse analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	**521**	Instructional Planning and Management in the Inclusive Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**531**	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**576**	Field Experience	Applies course content in elementary classrooms: observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**578**	Student Teaching in the Elementary School	Student teaching in elementary education setting for students in the MEd with Concentration in Teacher Certification.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**579**	Apprentice Teaching in Elementary Education	Apprentice teaching in elementary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
EED	**324**	Social Studies in Elementary Schools	Social studies education standards, curriculum, and instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program

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EED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**397**	Field Experience II	Observation, instruction, and management of small groups and the whole class.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**411**	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**412**	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**414**	Elementary School Curriculum and Organization	Rationales for instructional curricula; alternative curriculum designs and broad-based content; selected topics in school governance, finance, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Co-requisites: Elem Ed student, EED 411, EED 412, RDG 413 and EED 496 OR PDS (Professional Development School) student
EED	**433**	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management, and assessment practices. Lecture, discussion, lab.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**464**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**478**	Student Teaching in the Elementary School	Student teaching in elementary school classrooms, Synthesized experience in curriculum, instruction, and classroom management	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**479**	Capstone Seminar in Elementary Education	Reflective, experienced-based integration of theory and practice; professional development for K-8 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**492**	Honors Directed Study	Honors Directed Study	N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Must be an Honors student
EED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisite: Must be an Honors student
EED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
EED	**496**	Field Experience III	Applies course content in a K?8 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7	L	Pre-requisite: Admission to Professional Teacher Preparation Program
EED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
EEE	**101**	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	2.		
EEE	**120**	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		
EEE	**202**	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: EE student with Intro to ES; Pre/Co-requisite: PHY 131 and MAT 274 or 275 (with C or better if completed) OR Non-EE student with any Intro to Engr, Pre/Co-requisite: PHY 131 and MAT 274 or 275
EEE	**203**	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in EEE 202 (or currently enrolled) or EEE 302 AND a grade of C or better in MAT 242, 342 or 343 or be co-enrolled in MAT 242, 342 or 343.
EEE	**230**	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: A grade of D or better in CSE 100 or CSE 110 or CSE 200 AND a grade of D or better in CSE 120 or EEE 120.

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EEE	**241**	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: MAT 362 and PHY 131 with C or better or currently enrolled; ECE 201 with D or better OR MAT 267 or 272 and MAT 274 or 275 and PHY 131 with C or better or currently enrolled; EEE 202 with D or better or currently enrolled
EEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**304**	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a grade of D or better or be currently enrolled in EEE 203
EEE	**333**	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; CSE 101 or EEE 101 (or ECE100 or ECE 200); CSE 120 or EEE 120.
EEE	**334**	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student; EEE 202 (ECE 201)
EEE	**335**	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Gate sizing, timing analysis, sequential digital circuits. Amplifiers, multi-stage op-amps, A/D, D/A converters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; Must have completed EEE 334 or ECE 334 with a grade of D or better or be currently enrolled in EEE 334
EEE	**341**	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE student; EEE 203 or EEE 303 completed with a D or better or currently enrolled in EEE 203; EEE 241 completed with D or better (or MAT 362 completed with a grade of C or better) or currently enrolled in EEE 241
EEE	**350**	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203, EEE 303 or MAE 317 completed with a D or greater or currently enrolled in EEE 203 or MAE 317 or co-enrolling in EEE 203 OR Graduate Engineering students
EEE	**352**	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS or BSE students; MAT 362 with C or better or EEE 241 with a D or better or currently enrolled; PHY 241 or 361 with a C or greater or currently enrolled; CHM 114, 115, 116 or 118 with a D or greater or currently enrolled
EEE	**360**	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE student; EEE 202 or ECE 201 completed with a D or better or currently enrolled in EEE 202; EEE 241 completed with a D or better or currently enrolled OR Graduate Engineering student
EEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		
EEE	**404**	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 (or EEE 303) with D or better; EEE 230 (or CSE 230, EEE 225 or EEE 226) with D or better
EEE	**407**	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or EEE 303 completed with a D or greater or currently enrolled in EEE 203; MAT 342 or 343 completed with a C or greater or currently enrolled
EEE	**425**	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335 completed with a D or better or currently enrolled
EEE	**433**	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies. Fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 335
EEE	**434**	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 241 or EEE 340; EEE 352 (ECE 352)
EEE	**435**	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Must be an Engineering BS/BSE student AND earn a grade of D or better in EEE 436 or be co-enrolled in EEE 436.
EEE	**436**	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 352 (ECE 352)
EEE	**437**	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 436

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EEE	**439**	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 435
EEE	**443**	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 341
EEE	**445**	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 341 (EEE 340)
EEE	**448**	Fiber Optics	Principles of fiber-optic communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 341 (EEE 340)
EEE	**455**	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE; EEE 350; EEE 203 (or EEE 303)
EEE	**459**	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 202 or EEE 203
EEE	**460**	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students PHY 241, 294 or 361 with C or better or CHM 114, 115 or 116; MAT 274 or 275 with C or better; PHY 241 or 361 with C or better
EEE	**463**	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; CHM 114 or CHM 116 with D or better or currently enrolled; MAT 274 or MAT 275 with C or better or currently enrolled; MAE 240 (or ECE 340) with D or better or PHY 241 with C or better or currently enrolled
EEE	**470**	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 360
EEE	**471**	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 360
EEE	**472**	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisite: BS/BSE Engineering Students; EEE 203
EEE	**473**	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 360
EEE	**480**	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering BS/BSE students; EEE 203 or MAE 318 with C or better
EEE	**481**	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering BS/BSE students; EEE 203 and EEE 230 (or CSE 230) with D or better or only MAE 318 with D or better
EEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		
EEE	**488**	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE student; ENG 102 (or 105 or 108), EEE 241, EEE 350, EEE 334, and 4 courses from EEE 304, 333, 335, 341, 352 or 360, all with D or better
EEE	**489**	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.	L	Pre-requisites: Engineering BS/BSE students; EEE 488; seniors or post-bacc undergraduates
EEE	**492**	Honors Directed Study		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-6		Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**493**	Honors Thesis		N	LEC	N	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	0-6	L	Pre-requisites: Must be an Honors student in BSE Electrical Engineering; senior academic level
EEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering BS/BSE student; EEE 433
EEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-7		Pre-requisites: Engineering BS/BSE students only.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-3		Pre-requisites: Senior Electrical Engineering BSE students only.
EEE	**505**	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students only.
EEE	**506**	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**507**	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**508**	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**509**	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**510**	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**511**	Artificial Neural Computation Systems	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Fulton Engineering Graduate students. If you have credit in CHE 518, MSE 518, MAE 518 or MSE 475 you may not enroll in EEE 518
EEE	**523**	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**524**	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	4.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**525**	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**526**	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**527**	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG/MS/MSE/PHD/MCS students OR Science & Engr Of Materials students AND a grade of C or better in EEE 523.
EEE	**530**	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**531**	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**532**	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or be currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**533**	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**534**	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**535**	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**536**	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.

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EEE	**537**	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**538**	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**539**	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**540**	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**541**	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**543**	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**544**	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**545**	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**546**	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**547**	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**548**	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**549**	Lasers	Theory and design of gas, solid, and semiconductor lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**550**	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**551**	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**552**	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**553**	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**554**	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**556**	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**557**	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**558**	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**562**	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		
EEE	**563**	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EEE	**564**	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**571**	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**572**	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**573**	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**574**	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**575**	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate Engineering student
EEE	**577**	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**579**	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**581**	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**582**	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**586**	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**587**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**588**	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Master of Engineering or Electrical Engineering MS/MSE/PHD students
EEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students, or Nuclear Power Generation Certificate
EEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-4		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**606**	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**607**	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**625**	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**627**	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**631**	Heterojunctions and Superlattices	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students and a grade of C or better in EEE 531 or currently enrolled OR Science & Engr Of Materials PhD students.
EEE	**641**	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**643**	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**686**	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, Electrical Engineering MS/MSE/PHD students
EEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**731**	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	3.		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students.
EEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Electrical Engineering PhD students
EEE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Engineering MENG, MS, MSE, PhD and MCS students OR Science & Engr Of Materials PhD students.
EEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Department of Electrical Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Department of Electrical Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Department of Electrical Engineering	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**396**	Professional Orientation	Technical, professional, economic, and ethical aspects of electronics/computer engineering technology practice and industrial organization.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
EET	**401**	Digital Signal Processing for Multimedia	Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; MAT 262 or MAT 272 with D or better OR Technology and Innovation or Fulton Engineering graduate student
EET	**403**	PLCs, Sensors and Actuators	Applications, programming, and troubleshooting using PLCs. Interfacing to motors, sensors, and actuators. Fluid power principles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
EET	**406**	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3-4		Pre-requisites: EST 310 and MAT 267(or MAT 272). If you have credit for EET 506, you may not enroll in EET 406
EET	**407**	Energy Conversion and Applications	Electricity, magnetism, mechanics, heat and units, and three-phase circuits. Electrical machines, transformers, generation, transmission, and distribution of electrical energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: Technology and Innovation student, Minimum ASU GPA of 2.25; EET 208 OR Graduate Tech and Innovation student
EET	**410**	Electronic Circuits II	Analysis and design of OP-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; EET 301 and EET 310 with D or better OR Technology and Innovation or Fulton Engineering graduate student or TS/ES non-degree student
EET	**430**	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 310; Students who have credit for EET 530, may not enroll in EET 430
EET	**460**	Power Electronics	Analyzes circuits for control and conversion of electrical power and energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Prerequisites: EST 310
EET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EET	**506**	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate status. If you have credit for EET 406, you may not enroll in EET 506
EET	**508**	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**530**	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Students who have credit for EET 430, may not enroll in EET 530

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EET	**560**	Industrial Electronics and Applications	Analysis, design, and application of special electronic devices and systems to industrial control, power, communications, and processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**579**	Digital Image Communication	Image capture, transform, compression, storage, and transmission. Provides computer environment (software and hardware) to emphasize the practical aspect.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EGR	**101**	Introduction to Engineering Design I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		
EGR	**102**	Introduction to Engineering Design II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Pre-requisites: EGR 101 and MAT 170; Pre or Co-requisite: ENG 101 (or ENG 105, 107 or 111)
EGR	**104**	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	L	Pre-requisites: ENG 101, ENG 105, or 107
EGR	**126**	Engineering Applications of MATLAB	Using MATLAB to solve engineering problems; problem solving; computational and programming uses of MATLAB.	N	STO	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 with D or better
EGR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**201**	Fall Multidisciplinary Project	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**202**	Spring Multidisciplinary Project	Design, problem solving, and engineering practice developed in a multidisciplinary project setting. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: APM 265 (or APM 270, or MAT 265, or MAT 270) and EGR 102
EGR	**220**	Computer Hardware for Engineers	Computer architecture, types of memory, operating systems and interrupts, buses and multiplexing, error detection and correction, Internet, the Web, encryption.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**221**	Engineering Mechanics: Statics	Introduces the concepts of force, moment, and their relationships to the static equilibrium of a physical object.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**222**	Mechanics of Materials	Behavior of solid bodies subjected to loading. Stresses, strains, and displacements in bodies Analysis and design in solid mechanics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and EGR 102
EGR	**223**	Engineering Thermodynamics	Heat; conservation of energy; first and second laws of thermodynamics; open and closed systems; entropy, enthalpy, and internal energy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121 and CHM 113
EGR	**224**	Engineering Materials Selection	Methods of selecting materials for specific applications based on mechanical loading, electrical, thermal, and environmental constraints.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102 and PHY 121
EGR	**225**	Instrumentation I	Introduces instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher; EGR 102
EGR	**226**	Engineering Applications of LabView	Uses LabView to solve engineering problems; problem solving, data acquisition, and control using LabView.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: MAT 170 or higher
EGR	**227**	Manufacturing Processes I	Overview of manufacturing processes, including operating principles, process selection, and production economics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102
EGR	**229**	Engineering Ethics and Professionalism	Case studies in engineering ethics and professionalism.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 101 and ENG 101
EGR	**230**	Fluid Mechanics	Fluid properties, fluid statics, fluid continuum systems, control volumes, boundary control surfaces, energy and momentum, hydraulics, pipes, open channels, turbomachines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221
EGR	**231**	Engineering Mechanics: Dynamics	Rectilinear and planar motions of a particle and their relationships to the forces on it.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**234**	Structure and Properties of Engineering Materials	Relationships among material structure, processing, and properties. Mechanical, electrical, and magnetic properties. Corrosion.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: CHM 113; MAT 170 or higher
EGR	**235**	Instrumentation II	Frequency domain analysis of instrumentation systems and components, including transducers, associated electronics, and data acquisition and analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 225 and APM 265 (or APM 270, or MAT 265, or MAT 270)
EGR	**238**	Feedback Control	Introduces modeling, analysis, and design of feedback control systems, including block diagrams, transient responses, and linear controllers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: PHY 121
EGR	**239**	Engineering Economics	Economic dimensions in the evaluation of engineering alternatives. Income and cash flow. Time value of money. Cost/benefit analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 102; MAT 170 or higher
EGR	**280**	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.	CS	Pre-requisites: APM 265, APM 270, MAT 265 or MAT 270
EGR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		

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EGR	**301**	Fall Concentration Project	Design, communication, and critical thinking developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**302**	Spring Concentration Project	Design, engineering practice, and communication developed in a project setting based on selected concentration. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: ENG 102, EGR 201 and EGR 202; MAT 267, MAT 272 or MAT 294/APM 294 - Mathematics of Change III with C or better
EGR	**311**	Computer Aided Design for Land Development	Computer-aided design, 3D AutoCAD, drafting methods and drawing formats for land development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 301
EGR	**322**	Soils Engineering for Land Development	Soils engineering; soil classification, properties, and stresses; design and analysis of seepage, slopes, and foundations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Co-requisite: EGR 302
EGR	**324**	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment; structural modeling, analysis, and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 221; EGR 222
EGR	**331**	Electrical Implementation Technology	Conducting electrical projects using the facilities of the ASU Polytechnic campus. Juniors majoring in engineering or technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 or EET 301
EGR	**332**	Electrical Power and Heat	Generation and distribution of electrical power within localized systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**333**	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**335**	Instrumentation III	Noise in electrical systems and associated limits on instrumentation and measurement.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235
EGR	**336**	Introduction to Mechatronics	Pneumatic, hydraulic, mechanical, and electrical actuators. Models of mechatronic systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 231, EGR 235 and EGR 238
EGR	**337**	Remote Sensing and Imaging Principles	Remote sensing and imaging principles with a focus on land development applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): CHM 113; EGR 280; MAT 267, MAT 272, or MAT 294/APM 294-Mathematics of Change III
EGR	**339**	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275
EGR	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli¿s equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: PHY 121; APM 266, APM 271, MAT 266 or MAT 271
EGR	**341**	Testing and Failure Prevention	Testing behavior of engineering materials under various loads. Evaluation of causes, mechanisms, and prevention of failure in structures and components.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**342**	Computer-Aided Engineering	Theory and use of computer tools for high-level engineering analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: EGR 221, EGR 222 and EGR 231
EGR	**343**	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 221 and EGR 222
EGR	**346**	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 343
EGR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**401**	Engineering Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.	L	Pre-requisites: EGR 301 and EGR 302
EGR	**402**	Engineering Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	4.		Prerequisite(s): EGR 401 taken within one previous term
EGR	**423**	Land Development Engineering I	Identifies engineering issues in land development. Introduces site design, transportation planning and traffic engineering, roadway design, and environmental engineering. The role of the engineer in the design of the planned environment.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Co-requisite: EGR 401
EGR	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 340; Students who have credit for MET 432, may not enroll in EGR 432
EGR	**433**	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Pre-requisites: EGR 235; MAT 274 or MAT 275; MAT 342 or MAT 343
EGR	**434**	Digital Signal Processing: Media Standards	Introduces signal compression and reconstruction; audio, image, and video media standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**435**	Digital Signal Processing: Filtering	Introduces digital filtering, FIR and IIR filters, filter design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**436**	Wireless Communication Principles	Introduces wireless digital communications systems; overview of important concepts, including coding, modulation, equalization, decoding, and multiple access protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**437**	Wireless Communication Protocols	Surveys commercially important digital wireless protocols.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 433
EGR	**438**	Electromagnetic Compatibility and Interference	Electromagnetic compatibility and interference. Grounding and shielding techniques. Cables, connectors, and leads. Regulations and standards.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	1.		Prerequisite(s): EGR 235 and PHY 331
EGR	**445**	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering	3.		Prerequisite(s): EGR 301 or EGR 302

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EGR	**492**	Honors Directed Study		N	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-6		
EGR	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering	1-6	L	Pre-requisites: Must be an Honors student
EGR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-4		
EGR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-3		
ELL	**515**	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELL	**516**	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**501**	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**502**	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport. Prerequisite: ELS 501 or Instructor Approval.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: ELS 501
ELS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ELS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EN	**106**	Lit Apprec		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
EN	**584**	Internship		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of English	3.		
ENE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
ENE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ENE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**111**	Learning Community Composition I	Discovering, researching, and developing ideas in relation to the writer's purpose, subject, and audience. Only taught within a Liberal Arts (CLAS) Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**112**	Learning Community Composition II	Critical reading and writing; emphasis on rhetorical strategies of argumentation. Requires research paper. Only taught within a CLAS Learning Community.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 101 or ENG 111 with C or better
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		

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ENG	**197**	Medical Writing	For students in the MedStart summer program. Designed to further critical thinking, reading, and writing skills for students interested in a medical career.	N	LEL	N	GNA	Liberal Arts and Sciences	Department of English	3.		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**302**	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**307**	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210 with C or better
ENG	**312**	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU or SB	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**313**	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**315**	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**325**	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**326**	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**330**	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**331**	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**342**	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**345**	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**355**	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**356**	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**370**	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Prerequisite: ENG 102, 105, or 108 with C or better. Must have 35 or more earned hours. Students who have credit for BIO 315, may not enroll in ENG 370
ENG	**371**	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
ENG	**372**	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**374**	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**385**	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU) & H	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 with C or better

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ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**413**	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 with C or better. Students who have credit for LIN 517, may not enroll in ENG 413
ENG	**414**	Studies in Linguistics	Specialized topics in linguistics including phonology, syntax, semantics, pragmatics, discourse, language variation, and change.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 with C or better; Minimum 56 hours
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**416**	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**422**	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**426**	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:A grade of B or better in one course in ARS, ENG, or HST at 200 level or higher
ENG	**427**	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**428**	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-or Co-requisites:ARS 102, ENG 221, or HST 202 (with D or better if completed)
ENG	**429**	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**430**	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**434**	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**436**	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**442**	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**444**	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**445**	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**447**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 200; ENG 200-level literature course,or SLC 202, or FMS 100; FMS 200 . Students who have credit for SLC 450 or FMS 442 may not enroll in ENG 447
ENG	**448**	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**452**	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**453**	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**458**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
ENG	**459**	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**465**	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**469**	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better

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ENG	**470**	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**474**	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**475**	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.	HU & G	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	**480**	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**487**	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Poetry or ENG 387 with C or better; Students who have credit for ENG 411 Poetry may not enroll in ENG 487
ENG	**488**	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 310: Fiction or ENG 388 with C or better; Students who have credit for ENG 411 Fiction may not enroll in ENG 488
ENG	**490**	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Poetry or ENG 487 with C or better; Students who have credit for ENG 495 Poetry may not enroll in ENG 490
ENG	**491**	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411: Fiction or ENG 488 with C or better; Students who have credit for ENG 495 Fiction may not enroll in ENG 491
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**495**	Literary Forms: Theory and Practice	Types, history, analysis of traditional forms and contemporary adaptations. Separate sections for poetry, fiction. Each genre may be taken once.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ENG 411 with C better
ENG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Pre-requisites: Must be an Honors student
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**502**	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**503**	Comparative Literature, Theory, and Practice	Problems, methods, and principles of comparative analysis, illustrated by selected critical essays and literary/cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**504**	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**505**	Writing Workshops	Intense poetry and fiction workshops for experienced writers, emphasizing individual style.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**506**	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	DIS	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**507**	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 480, may not enroll in ENG 507
ENG	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ENG	**530**	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**531**	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**532**	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**533**	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**534**	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**535**	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**536**	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**537**	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**538**	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**539**	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**540**	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**542**	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**543**	Studies in Anglophone Literatures	Selected topics, texts, periods, literary trends in works by world authors writing in English.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**544**	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**545**	Studies in Women's Literatures	Selected topics, texts, periods, and figures in works written by and/or about women, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**546**	Gender Studies	Selected topics, periods, and themes in the study of gender and sexuality, including attention to theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**550**	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**551**	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**552**	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**553**	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**554**	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**556**	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**560**	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**561**	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**562**	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**563**	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**597**	MA Capstone Seminar	The capstone seminar is required for MA students who choose the non-thesis option, which can consist of writing a research paper, designing curriculum, or developing a professional portfolio. Requires oral presentation of project.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**602**	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**603**	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**604**	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**606**	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**632**	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**635**	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**636**	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**639**	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**642**	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**645**	Advanced Studies in Gender Issues	Seminar courses that consider the influence of gender on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**651**	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**652**	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**654**	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**661**	Advanced Studies in Film	Seminar courses on topics, genres, and figures in film studies, including technical and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**662**	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**663**	Fiction Genres	Creative writing courses in time and fiction, gothic fiction, myth in fiction, science fiction, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**664**	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**665**	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**667**	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**213**	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**219**	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**222**	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**305**	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**323**	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**353**	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**360**	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**365**	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-4	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**369**	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**386**	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisite:must have completed ENG 102, or 105, or 108 with a grade of C or better; or be currently enrolled in ENG 102, 105, or 108
ENG	**400**	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & H	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**401**	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**410**	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**415**	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**418**	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**421**	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**423**	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**424**	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**425**	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**431**	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**432**	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**433**	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**437**	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**438**	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**440**	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**450**	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better

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ENG	**454**	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**455**	Contemporary Women Writers	Critical examination of literature by contemporary women writers. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**457**	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**460**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**461**	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**462**	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**463**	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**476**	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**477**	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**478**	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**479**	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		Pre-requisites: Must be an Honors student
ENG	**493**	Honors Thesis		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ENG	**101**	First-Year Composition	Discovers, organizes, and develops ideas in relation to the writer's purpose, subject, and audience. Emphasizes modes of written discourse and effective use of rhetorical principles. Foreign students, see ENG 107.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): ACT English score of 19 or higher; SAT Verbal score of 470 or higher; Accuplacer score of 5-7 (unless taken prior to May 12, 2009, then score of 8-10) or have completed WAC 101 with a grade of A, B, C or Y
ENG	**102**	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**105**	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness. Credit is allowed for only ENG 105 or First-Year Composition.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 26 or higher; SAT Verbal score of 620 or higher or Accuplacer score of 11 or above;Students who have taken ENG 101, may not enroll in ENG 105
ENG	**107**	English for Foreign Students	For students from non-English-speaking countries who have studied English in their native countries, but who require practice in the idioms of English. Intensive reading, writing, and discussion. Satisfies the graduation requirement of ENG 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Prerequisite(s): TOEFL score of 560 or higher, ACT English score of 19 or higher, SAT Verbal score of 470 or higher, Accuplacer minimum score of 5 (exam taken prior to May 12, 2009 requires minimum score of 8) or WAC 107 with A, B, C or Y
ENG	**108**	English for Foreign Students	For foreign students; critical reading and writing; strategies of academic discourse. Research paper required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Must have completed ENG 101 or 107 with a grade of C or greater or be currently enrolled
ENG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ENG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**200**	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: Literature, Writing & Film (BA,minor,certificate,BIS), Pre Sec Educ- English, Sec Ed-English, English major or minor(Linguistics, Literature or Creative Writing) or BIS with English emphasis; ENG 102, ENG 105 or ENG 108 with C or better
ENG	**201**	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**202**	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**204**	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**210**	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**212**	English Prose Style	Analysis and practice of writing in various classical and modern prose styles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**214**	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**215**	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**216**	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**217**	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**218**	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**221**	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**230**	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**241**	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**242**	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre/Co-requisite: ENG 200 (with C or better if completed)
ENG	**243**	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**244**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**245**	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**287**	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**288**	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**301**	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**303**	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**310**	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210 with C or better
ENG	**311**	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**314**	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**317**	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**320**	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**321**	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**328**	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**329**	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**333**	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**334**	The American Southwest in Literature and Film.	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**335**	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**337**	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**344**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**352**	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**354**	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFH 354 or ENG 354
ENG	**359**	American Indian Literature	Selected oral traditions of American Indians and their influences on contemporary Native American literary works.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**364**	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**366**	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**367**	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**368**	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**373**	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**375**	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**376**	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

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ENG	**377**	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**378**	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**379**	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**382**	Digital Project Management for Humanities and Arts	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**383**	Digital Media in the Humanities and Arts	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**387**	Intermediate Creative Writing Workshop in Poetry	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Poetry or ENG 287 with C or better; Students who have credit for ENG 310 Intermediate Poetry may not enroll in ENG 387
ENG	**388**	Intermediate Creative Writing Workshop in Fiction	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 210: Fiction or ENG 288 with C or better; Students who have credit for ENG 310 Intermediate Fiction may not enroll in ENG 388
ENG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
ENG	**411**	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 with C or better
ENG	**412**	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 310 or ENG 388 or ENG 411 with C or better
ENG	**464**	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**466**	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**467**	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**468**	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**471**	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**472**	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Must have 56 or more earned hours
ENG	**481**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Students who have credit for ENG 581, may not enroll in ENG 481
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**482**	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	DIS	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	**483**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters & Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**492**	Honors Directed Study		N	RSC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
ENG	**493**	Honors Thesis		N	THE	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
ENG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
ENG	**581**	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for ENG 481, may not enroll in ENG 581
ENG	**583**	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**795**	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EDP 710, EDP 712 or EDP 714 with C or better
EPD	**710**	Current Research in Design	Review and critical evaluation of contemporary literature and method in architecture, building science, interior design, industrial design, and landscape architecture. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**712**	Current Research in Planning	Review and critical evaluation of contemporary literature and method in environmental planning, landscape ecology, urban design, and urban and regional planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student
EPD	**714**	Current Research in History, Theory, and Criticism	Review and critical evaluation of contemporary literature and method in the theory and history of architecture, design, and planning. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3.		Pre-requisite: PhD in Environmental Design & Planning student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EPD	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EPD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**501**	Environmental Social Science Theory and Practice I	First part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**502**	Environmental Social Science Theory and Practice II	Second part of a two-semester core course investigating key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**510**	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**513**	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ESS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	THE	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ESS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**200**	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		Pre-requisites: Sophomore standing
EST	**210**	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJT's, FETs, op-amps.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)

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EST	**310**	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210
EST	**345**	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200
EST	**370**	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 200; EST 210; UET 331
EST	**372**	Wireless Communication Systems	Components and signal processing for modern wireless communication systems, including major applications, problems, and new technologies.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: EST 310
EST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**482**	Industrial Practice: Internship/Co-Op	Specially assigned or approved activities in electronic industries or institutions. Requires report.	N	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
EST	**490**	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
EST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
EST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; min GPA 2.25; OR Technology and Innovation or Fulton Engineering graduate student
EST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
EST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Must have an University Cum GPA of 3.00 or greater; Must be a Tech Science or Engineering senior OR a Graduate, NonDegree or Post Bacc student
EST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
EST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Graduate/NonDegree/Post Bacc student OR University Cumulative GPA is greater than or equal to 3.00 AND must be Tech Sci or Engr student AND Academic Level equal to Senior
ETH	**100**	Introduction to Ethnic Studies	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	
ETH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**300**	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	
ETH	**310**	Research Methods in Ethnic, Racial, and First Nations Populations	Examines analytical tools and methodological approaches (ethnography, oral histories, digital-storytelling, information literacy) to study ethnic, racial, and first nations populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
ETH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
ETH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
ETH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
ETM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-3		
ETM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**301**	Environmental Management	Focuses on knowledge and skills necessary to manage environmental programs. Perspectives include regulatory, individual, corporate, and consulting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**302**	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: CHM 101 with D or better; MAT 170 with D or better
ETM	**303**	Environmental Regulations	Explores environmental laws, regulations, and directives. Addresses air, land, and water.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ETM	**360**	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**362**	Managing Natural and Technological Disasters	Federal, state, and local responses to emergencies. Management of mass casualties, evacuation, sheltering, and terrorism; declaration of emergency procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources. Cross-listed as FSM 363. Credit is allowed for only ETM 363 or FSM 363.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**364**	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**401**	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**402**	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**406**	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**407**	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-E**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**424-M**	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-E**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**426-M**	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**428**	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	
ETM	**460-E**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**460-M**	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**461**	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy. Credit is allowed for only ETM 461 or 561. Prerequisite: junior or senior standing or instructor approval.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**468**	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**469**	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
ETM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
ETM	**501**	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ETM	**502**	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**503**	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**504**	Technology for Storage, Treatment, and Disposal of Hazardous Materials	Current and state-of-the-art technologies and future trends for storage, treatment, and disposal of hazardous materials and waste.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**505**	Quantitative Analysis and Practical Laboratory Techniques	EPA methodologies for sampling and analysis of soils and water. Includes quality assurance and regulatory requirements. Lab is arranged off site.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**506**	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**507**	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**520**	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**522**	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**523**	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**524**	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**525**	Risk Assessment for Hazardous Materials	Applies the risk assessment process in situations ranging from hazardous facilities regulation to toxic substances in the environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**526**	Current Environmental Technology Issues	In-depth study of current issues in environmental technology facing both the private and public sectors.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**527**	Environmental/Resources Regulations Concepts	Develops environmental regulations from common law to statutory requirements. Emphasizes Superfund, hazardous materials, toxics, and liability contracts.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**528**	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**540**	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**560**	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**561**	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program. Credit is allowed for only ETM 561 or 461.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**567**	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**571**	The Foundations of Homeland Defense and Security	The enemy, policies, key players, and legal issues surrounding homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**572**	Multidisciplinary Approaches to Homeland Defense and Security: Collaborating to Integrate	Multidisciplinary approach to prevention, mitigation, preparedness, response, and recovery from incidents of national significance.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**573**	Strategic Planning and Organizational Imperatives in Homeland Defense and Security	Efforts to integrate and mobilize government and private sector resouces for homeland defense and security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**574**	Special Topics in Homeland Defense and Security	Discusses contemporary challenges of asymmetric warfare, terrorism, and the virtual global battlespace, as well as emerging threats to homeland security.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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ETM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ETM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**601**	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**610**	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EVO	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EVO	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
EXW	**105**	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week. fee	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**212**	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	**214**	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Prerequisite(s): Exercise and Wellness or Physical Education major.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	**215**	Physical Activity and Healthy Lifestyles	Applies principles of physical activity to personal fitness testing and program planning for people of all ages. Telecampus course. Not open to Exercise and Wellness majors or to students with credit ib EXW 325.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Non-EXW students; Credit is allowed for only EXW 215 or EXW 325
EXW	**216**	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Exercise and Wellness or Physical Education major
EXW	**294**	Special Topics		Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**300**	Foundations of Exercise and Wellness	In-depth analysis of the roles, responsibilities, and theories of professional fields of study related to health promotion, physical activity, fitness, and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: EXW 100 or KIN 100 with a D or better, or co-enrolled in EXW 100 or KIN 100; 30 minimum hours
EXW	**302**	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	
EXW	**305**	Physical Activity Instruction: Advanced	Advanced-level instruction in a variety of physical activities. Continuation of EXW 105. May be repeated for credit. Y grade only. 2 hours per week. fee	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
EXW	**310**	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-heath consumerism, and statistical analysis.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: Must be a Exercise Wellness student; must have completed MAT114, MAT117, MAT119, MAT142 or MAT170 with a C or greater
EXW	**311**	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**315**	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 and BIO 202 with C or better
EXW	**320**	Management and Leadership in Exercise and Wellness	Studies management, leadership, legal, ethical, and programmatic theories and applications in fitness and wellness settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: ENG 102, 105 or 108; Minimum 30 hours
EXW	**322**	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
EXW	**325**	Fitness for Life	Physical fitness and benefits of exercise with emphasis on self-evaluation and personalized program planning for a lifetime. Not open to students with credit in EXW 215 or 301.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students may not sign up for EXW 325 who have received a D or better in EXW 215 or EXW 301
EXW	**330**	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: BIO 201 with C or better
EXW	**335**	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementaion of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 and 202 with C or better
EXW	**342**	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**350**	Substance Abuse and Addictive Behavior	Studies addictive substances, their pharmacology and effects. Psychosocial risk factors for, and consequences of, substance abuse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
EXW	**380**	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: PGS 101 with a C or better; 30 credit hours or more
EXW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**400**	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed PGS 101 with a C or greater
EXW	**420**	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Must have completed EXW 315 with a C or greater
EXW	**425**	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 315 with C or better; EXW 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	**442**	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites:EXW 300 with a D or better
EXW	**444**	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 300 and EXW 310 with a C or greater
EXW	**446**	Health Promotion and Program Evaluation	Applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: EXW 300 with C or better; EXW 342 with C or better
EXW	**450**	Cultural and Social Issues in Exercise and Wellness	Examines contemporary sociocultural issues and social determinants of health and physical activity. Focuses on health disparities, obesity, and social stressors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	(L or SB) & C	Pre-requisites: PGS 101 and EXW 300 with C or better
EXW	**460**	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 315 with a C or greater

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EXW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	FLD	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Exercise and Wellness concentration students with EXW 400, 420, and 425 with C or better or EXW Health Promotion concentration with EXW 346, and 444 with C or better
EXW	**492**	Honors Directed Study		N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
EXW	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
EXW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
EXW	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		
EXW	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
EXW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**501**	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**534**	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**536**	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**538**	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**542**	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**544**	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**635**	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**640**	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**641**	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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EXW	**642**	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EXW 500 and EXW 501 with a C or greater
EXW	**643**	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**645**	Biostatistics in Physical Activity, Nutrition, and Wellness	Introduces biostatistical methods in physical activity, nutrition, and health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**701**	Research Methods for Community-Based Interventions	Develops skills to design and conduct community-based research interventions, identify essential elements of program fidelity, analyze quasi-experimental research.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
EXW	**218**	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	Nursing & Health Innovation	Department of Exercise and Wellness	2.		Pre-requisite: Exercise and Wellness or Secondary Education (Physical Education) major
FAS	**101**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
FAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**360**	Black Families in the Diaspora	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	Pre-requisites: AFS 200 or FAS 101; Credit is allowed for only AFS or FAS 360
FAS	**361**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390 (or equivalent) completed with D or better or currently enrolled. Credit is allowed for only FAS 361 or SOC 391
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
FAS	**390**	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		

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FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**431**	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
FAS	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for SOC 435, may not enroll in FAS 435
FAS	**440**	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
FAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
FAS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisite: Must be an Honors student
FAS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
FAS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
FAS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
FAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**503**	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	DIS	N	GNA	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**531**	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**539**	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**570**	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**571**	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**572**	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**573**	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**574**	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**575**	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**576**	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**577**	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**578**	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**579**	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**581**	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisite: MAS-MFT student
FAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**301**	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**331**	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
FAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**403**	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).

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FAS	**421**	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421
FAS	**436**	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**445**	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
FAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
FAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FAS	**330**	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**332**	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
FAS	**370**	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	
FIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	**300**	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ACC 241 or 242 or 271, and ECN 221 and ECN 212 with a grade of C or better.
FIN	**301**	Fundamentals of Finance	Introduces the basic concepts, principles, and tools of financial management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status; ACC 240, ECN 112 and QBA 221 with C or better
FIN	**302**	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W. P. Carey Finance major; ACC 241 or 242 or 271, ECN 221 and ECN 212 with C or better; Students who have taken FIN 300 or 303 may not enroll in FIN 302
FIN	**303**	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; Must have ACC 241 or 271 , ECN 211 or 213, ECN 212 or 214, ECN 221 and MAT 211 or 271 with a grade of C or better.
FIN	**331**	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 241 or 242 or 271, ECN 212, and ECN 221 with C or better
FIN	**361**	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 302 with C or better
FIN	**380**	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree student with minimum 2.00 GPA OR Graduate student; Not for Finance major credit
FIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: Non-Finance students; Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree seeking student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	**410**	Investments	Strategies and mechanics of investing in stocks, bonds, and derivatives. Topics include investment selection, portfolio management, financial markets, and institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Management student with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better
FIN	**411**	International Finance	Explores the environmental challenges facing financial managers in global financial markets and develops tools and techniques to meet such challenges.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt OR Int' Studies student; FIN 300 or 301 with C or better; GLB 301 with C or better
FIN	**412**	Financial Management	In-depth extension of core finance course. Typical topics include financial planning/control, risk and valuation, capital budgeting.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Global Mgt with professional or conditional status OR Finance Mgt student; FIN 300 or 301 with C or better; ACC 236 or 410 with C or better
FIN	**421**	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 303 or 361) with C or better
FIN	**427**	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**431**	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**456**	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	G	Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and 361 with C or better; Honors student in Finance: FIN 303 and FIN 331 with C or better
FIN	**461**	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.	L	Pre-requisites: W.P.Carey Finance BS student; FIN 421 with C or better
FIN	**481**	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey Finance BS student with Honors status; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Finance	1-6		Pre-requisites: Must be an Honors student
FIN	**493**	Honors Thesis		N	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Pre-requisites: Must be an Honors student
FIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey Finance BS student; ACC 315, 303 or 340 with C or better; FIN 331 and (FIN 361 or 303) with C or better
FIN	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		
FIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	**502**	Managerial Finance	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Pre-requisites: ACC 502 with C or better; ECN 501 with C or better
FIN	**520**	Financial Modeling	Demonstrates how Excel programming techniques can be used to model and manipulate financial data, as applied to equities, options on equities, and options on bonds.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**525**	Investment Strategies	Introduces theories and practices of the investment process. Covers the fundamental principals and applications of modern portfolio theory, risk-return relation, asset pricing models, investment performance evaluation, and stock and bond valuation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**530**	Derivatives	Covers options, forward contracts, futures contracts, and swaps. Provides a good knowledge of how these contracts work, how they are used, and how they are priced.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**540**	Financial Markets and Instruments	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**550**	Fixed Income Securities	Describes important fixed income securities and markets, and develops tools for valuing fixed income securities and managing interest rate risk. Covers traditional bonds and term structure concepts as well as fixed income derivatives and interest rate modeling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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FIN	**560**	International Finance and Investments	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**570**	Portfolio Strategies and Hedge Funds	Introduces the principles of asset valuation from an applied perspective. Valuation of financial securities and portfolio management applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**781**	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMP	**201**	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	
FMP	**202**	Film and Media Production Crew	Provides opportunity to serve in various capacities on student film sets in order to obtain practical production experience. Practicum. Prerequisite: instructor approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
FMP	**220**	Final Cut for Filmmakers	Required 30-hour lab designed to teach students basic editing techniques utilizing the Final Cut Pro Suite of software.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisite: Film and Media Production student
FMP	**250**	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**300**	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	**318**	Directing for Film	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film and Media Production student; FMP 320 with C or better
FMP	**320**	Film and Media Post-Production	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be Film and Media Production student; FMP 300 (or THE 400) with a C or better; FMP 220 or FMP 294 topic Cut Pro for Flimmakers with a C or better
FMP	**345**	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
FMP	**417**	Business Ethics in Entertainment	Business and ethical practices of the entertainment industry; analysis of ethical decision-making techniques.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
FMP	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & C	
FMP	**480**	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	**481**	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
FMP	**492**	Honors Directed Study		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
FMP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
FMP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor
FMP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Pre-requisites:Must be a Film & Media Production student
FMP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisite: Fine Arts Graduate student
FMS	**100**	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**110**	Introduction to New Media	Explores the cultural effects of new media technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	
FMS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		

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FMS	**194**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	2.		
FMS	**200**	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & H	
FMS	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**209**	Screenwriting Fundamentals (online)	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Restricted to online Film and Media Studies students only
FMS	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**300**	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**302**	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**309**	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**310**	Asian Pacific American Arts and Cultures	Explores Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**312**	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**340**	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**345**	Asian Pacific Americans and Film	Examines representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C & H	
FMS	**350**	Virtual Reality in Film and Media	Analyzes virtual reality in films, media, and fiction. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**351**	Emerging Digital Media	Analyzes modern cultural and digital technologies. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L	Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**354**	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: FMS 100
FMS	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	
FMS	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	**377**	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: FMS 100, ENG 101 and 102
FMS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**409**	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better; FMS 309 with C or better
FMS	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	
FMS	**440**	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**441**	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**442**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 200; ENG 200-level literature course, SLC 202 or FMS 100; FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450

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FMS	**450**	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**460**	Masculinity and Film	Examines the representation of masculinity and the male body in film. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**461**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	C	
FMS	**468**	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**480**	Globalization, Technology, and Culture	Studies the socio-political relationship between media and the evolution of globalization. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**481**	Entertainment Technologies	Applies academic and industry knowledge to simulate and to solve "real world" entertainment industry problems and needs.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**482**	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**483**	Techno-Entertainment Convergences	Uses historical and scientific methods to forecast future technological developments and use in the entertainment industry.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
FMS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
FMS	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**490**	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
FMS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
FMS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
FMS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
FMS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
FMS	**502**	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504
FMS	**507**	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students

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FMS	**509**	Race, Sex, and Identity Online (Online)	This course is available online only. Investigates scholarly methods and studies focused on the intersection of race, gender, and sexuality online.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**511**	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**512**	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: MAS American Media and Popular Culture students
FMS	**520**	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	**521**	Semiotics of Popular Culture	Uses semiotics and cultural studies to uncover representations of alienation.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**522**	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FMS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**101**	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings. Credit is allowed for only FRE 101 or 111	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 101 if they have received a C or better in FRE101,102,201,202,205,311,312,321,322,411,412
FRE	**102**	Elementary French	See FRE 101. Credit is allowed for only FRE 102 or 111.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisite: FRE 101; May not sign up for FRE 102 if received a C or better in FRE 111,201,202,205,311,312,321,322,411,or 412
FRE	**111**	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study. Credit is allowed for only FRE 111 or 101 or 102 or 107. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students may not sign up for FRE 111 if they have received a C or better in FRE 101,102,201,202,205,311,312,321,322,411,412
FRE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
FRE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**201**	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Student may not enroll in FRE 201 if received a C or better in: FRE202,205,311,312,321,322,411,412
FRE	**202**	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Students may not sign up for FRE 202 if they have received a C or better in FRE205,311,312,321,322,411,412
FRE	**205**	Readings in French Literature	Designed to teach reading with facility and comprehension. Vocabulary building and textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: FRE 202: Students who have received a C or better in FRE 321 or 322, may not enroll in FRE 205
FRE	**207**	French for Business	Alternative to FRE 202. Functional approach. Emphasizes communicative competence for international professions. Not open to students with credit in FRE 202. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	8.	G	
FRE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**311**	French Conversation	Further practice in speaking French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: FRE 202 with C or better. Credit is allowed for only FRE 311 or FRE 411
FRE	**312**	French Composition	Further practice in writing French, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: FRE 202 with C or better. Students may not enroll in FRE 312, if they have received credit for FRE 412
FRE	**315**	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 with a grade of D or better, or currently enrolled
FRE	**319**	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: FRE 312
FRE	**321**	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & H	Pre-requisites:FRE 205, 312 with a grade of D or better or currently enrolled
FRE	**322**	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: FRE 205; FRE 312
FRE	**325**	Introduction to French Film	Studies French artistic contribution from 1895 to present, with emphasis on recent films starting with the New Wave.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
FRE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	**411**	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: FRE 311; 6 hours of 300-level French
FRE	**412**	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:FRE 312; 6 hours of 300-level French
FRE	**415**	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:6 hours of upper-division French
FRE	**416**	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	pre-requisites:6 hours of upper-division French
FRE	**421**	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 311 & 312 with a grade of D or better, or currently enrolled
FRE	**422**	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ASB 480, ENG 213 or SLC 400
FRE	**423**	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ASB 480, ENG 213, SLC 400, SLC 201, or FRE 421
FRE	**432**	Gay Identities in Modern French Literature	Examines the representation of homosexuals as well as the emergence of homosexuality as a theme in modern French literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 322; 6 hours of 300-level French courses
FRE	**441**	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:FRE 321 with a grade of D or better or currently enrolled, and 6 hours of 300-level French courses
FRE	**442**	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:FRE 321; 6 hours of 300-level French courses
FRE	**445**	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:FRE 321; 6 hours of 300-level French courses
FRE	**451**	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**452**	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**453**	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**461**	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**462**	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**471**	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	**472**	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:9 hours of 300-level French courses
FRE	**480**	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: FRE 412
FRE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	**485**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:FRE 480 with a grade of D, or currently enrolled
FRE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
FRE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
FRE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
FRE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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FRE	**510**	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**521**	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**531**	Medieval French Literature	Readings in the epics, early drama, Roman courtois, and other representative literary genres of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**535**	Identity, Gender, and Society in Early Modern French Literature	Readings in French Renaissance literature with special focus on Rabelais, Montaigne, Marguerite de Navarre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**585**	Literary Translation	Theory and practice of literary translation with emphasis on application through individual translation project.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FRE	**790**	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**502**	Managing Change in the Fire Service	Dynamics of organizational change and the effect change has on the delivery of fire services to the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**503**	Fire Service and the Community	Theoretical concepts of public service to build an understanding of how the fire service fits within the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**510**	Fire Department Budgeting and Finance	Functions of budgeting and finance in fire departments within the context of the public sector.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**522**	Leadership in the Fire Service	Leadership theories analyzed in a variety of contexts within public and private organizations, then applied to the leadership challenges in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**530**	Public Policy in the Fire Service	Public policy and the fire services' role in the making of public policy in the community.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**540**	Applied Research Methods in the Fire Service	Research methods applicable to problems that arise in the fire service, including assessments of programs and customer service research.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student

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FSA	**550**	Fire Service Program Management	Functions of developing and managing fire service programs. Designed for advanced students of fire service administration.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**551**	Fire Prevention and Public Fire Education	Managing fire prevention organizations and administering fire prevention programs in a contemporary society.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**552**	Emergency Medical Services Administration	Complex issues of administering an Emergency Medical Services (EMS) division in a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**553**	Special Operations in the Fire Service	Focuses on the variety of special emergency services operations provided by contemporary fire departments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**554**	Emergency Fire Operations Administration	Delivery of emergency services to a community by a contemporary fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		
FSA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
FSE	**105**	College Adjustment and Survival	Explores career goals and majors. Emphasizes organization and development of study skills, including time management, stress management, and use of the library.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Freshman or Sophomore in the Ira A. Fulton School of Engineering
FSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**301**	Entrepreneurship for Engineers	Overview of entrepreneurship, with emphasis on principles suitable for undergraduate engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisites: School of Engineering BS or BSE student; Minimum Junior standing
FSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: Engineering or Construction BS or BSE student
FSE	**399**	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisite: Engineering BS or BSE student
FSE	**400**	Creating and Launching a Technology Venture	Focuses on creative and logical processes involved in developing a business idea and investigating its market feasibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**401**	Intellectual Property for Technology Ventures	Provides basic understanding of legal issues likely to be encountered in a technology venture; practical approaches and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**402**	Operating a Technology Venture	Managing and leading technology ventures. Principles of organizing, planning, controlling, and leading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**403**	Entrepreneurship Practicum	Places students pursuing a Certificate in Technology Entrepreneurship with a practicing entrepreneur to learn about venture development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Engineering BS or BSE student; Pre/Co-requisite: FSE 301
FSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Pre-requisites: Must be an Honors student
FSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		
FSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**501**	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	**502**	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**503**	Collaborative Innovation Management	Techniques and practices of collaboration innovation, including an indepth look at managing outsourcing relationships and "wikinomics."	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**504**	Corporate Venturing and Intrapreneurship	Explores how companies can create intrapreneurial cultures that lead to greater levels of corporate venturing and long-term competitiveness.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3.		Pre-requisite: School of Engineering Graduate student
FSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**590**	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**594**	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Pre-requisite: School of Engineering Graduate student
FSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FSE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
FSM	**304**	Fire Personnel Management	Promotion, personnel development, career and incentive systems, validation of physical requirements, managerial and supervisory procedures.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**305**	Quality Emergency Services	Covers quality issues relating to services delivered by progressive fire departments. Covers management of personnel and resources during organizational change.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		

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FSM	**306**	Fire Prevention Organization and Management	Examines and evaluates the techniques, procedures, programs, and agencies involved in preventing fires.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**307**	Fire Department Safety Organization and Management	Focuses on the management of fire department safety programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	2.		
FSM	**308**	Fire Department Budgeting	Examines the role of fire department budgets and their relationship to other levels of government as a planning tool.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**309**	Emergency Medical Service Organization and Management	Focuses on the administration and management of emergency medical services delivered by a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**363**	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**400**	Human Behavior and the Fire Threat	Proper ways of conducting post-fire interviews; emphasizes the psychological effects of communications during emergencies.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**401**	Labor Relations in the Fire Service	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**404**	Program Management and Accreditation	Examines the relationships between management and unions using the Relations by Objectives model.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**405**	Fire Service Leadership	Focuses on developing personal and organizational leadership qualities required to be successful in the fire service.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**421**	Political and Legal Consideration in Fire Science	Study of legal and political considerations that affect the decision making of fire service managers.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**425**	Fire Service Administration	Presents modern management and planning techniques that apply to organizing a fire department.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**460**	Incident Management Systems and Emergency Operations Center	Covers IMS, terminology, players, and management philosophy. EOC setup, activation, operation, and termination. EOC funding and politics.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
FSM	**493**	Honors Thesis	Capstone applied project. Applies knowledge learned from FSM course work to solve a practical fire service problem.	N	LEC	N	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6	L	Pre-requisites: Must be an Honors student
FSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
FSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate student
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GB	**305**	Business Law		N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3.		
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SB & G	
GCU	**141**	Introduction to Economic Geography	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	200	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GCU	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	322	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	323	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	325	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	326	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	328	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	332	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	344	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	
GCU	350	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	351	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	359	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G & H	
GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & C	

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GCU	**424**	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**425**	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or SB) & G	
GCU	**426**	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**432**	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB & G	
GCU	**433**	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GCU	**441**	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**442**	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**474**	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SB	
GCU	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	**495**	Quantitative Methods in Geography	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: MAT 119, 170, 210 or 270
GCU	**496**	Geographic Research Methods	Scientific techniques used in geographic research. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GPH 370 with C or better
GCU	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GCU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies. Seminar.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	**515**	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**516**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GCU 516, PUP 560 or SOS 560
GCU	**529**	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**542**	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**585**	Research Design and Proposal Writing	Teaches how to develop a theoretical framework, write a research proposal, present orally, and engage in research ethically.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: Graduate students only
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**596**	History of Geographic Thought	Historical development of geographic thought from pre-Greek days to the early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**671**	Introduction to Geographic Teaching	Intensive course in geographic education, scientific method in research on geographic education, research trends, resources for teaching, best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GCU	**672**	Physical Geography for Teachers	Transfer of matter and energy exhibited in the Earth's climate, hydrology, soils, biogeography, and landforms; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**673**	Human Geography for Teachers	Analyzes cultural, economic, urban, historical, transportation, population, political, and development geography; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**674**	Geographic Techniques for Teachers	Introduces geographic techniques, including GPS, GIS, remote sensing, cartography, qualitative, and field methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**675**	World Geography for Teachers	Systematic overview of geographic knowledge about different world regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**676**	North American Geography for Teachers	Systematic overview of geographic knowledge about different North American regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**677**	Geography Across the Curriculum	Intensive course on intergrating reading, writing, and mathematics standards with geography content; selected case studies; best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GCU	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SB & G	
GCU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**253**	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**351**	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites:must have completed MAT 117, or 119, or 142, or 170, or 210, or be currently enrolled in one of these
GCU	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
GCU	**357**	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**361**	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
GCU	**373**	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation. fee	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	SG	Pre-requisite: PSY 230 or SBS 304
GCU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
GCU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
GCU	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GCU	**102**	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments. Fee.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	

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GCU	**121**	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	SB & G	
GER	**101**	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar. Credit is allowed for only GER 101 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**102**	Elementary German	See GER 101. Credit is allowed for only GER 102 or 111. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**111**	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study. Credit is allowed for only GER 111 or both GER 101 and 102. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
GER	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
GER	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**201**	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**202**	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
GER	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**311**	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays, and stories. 3 semester hours limit for majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**312**	German Conversation	See GER 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**313**	German Composition	Intensive practice in writing, emphasizing style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**411**	Advanced Grammar and Conversation	Improvement of diction and idiom through intensive oral review.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
GER	**412**	Advanced Grammar and Composition	Improvement of writing ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:GER 313 with a grade of D or better or currently enrolled
GER	**415**	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**416**	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisite: A 300-level German course
GER	**421**	German Literature	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: 6 hours of 300-level German courses
GER	**422**	German Literature	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: 6 hours of 300-level German courses
GER	**453**	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	
GER	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
GER	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GER	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

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GER	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**521**	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GER	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**493**	Honors Thesis		Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-6		
GIT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	College of Tech & Innovation	Department of Engineering	1-3		
GIT	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GIT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Tech & Innovation	Department of Engineering	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Tech & Innovation	Department of Engineering	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GIT	**110**	Technical Graphics	Representation of 2-D and 3-D geometry in orthographic, isometric, and oblique projection; detail, assembly, sectional, and auxiliary views; ANSI-standard lettering, and dimensioning for geometric and positional tolerance.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**135**	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**210**	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences. Integrated lecture/lab.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**212**	Computer-Aided Design and Drafting (CADD)	CADD for product design, representation, and documentation; includes projection theory, descriptive geometry, graphics analysis, drafting standards, and precision dimensioning techniques.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisite: GIT 110
GIT	**215**	Introduction to Graphics Programming	Graphic user interface planning and evaluation using industry-standard programming tools.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**230**	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**301**	Website Development for Nonmajors	Analyzes Web programming applications for non-GIT majors; emphasizes problem solving in structuring Web documents.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: Minimum 45 hours
GIT	**303**	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135, GIT 230
GIT	**312**	3-D Computer Graphics Modeling and Representation	3-D solid modeling applications: concepts, techniques, data structures, modeling strategies, assemblies, geometric representation.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	CS	Pre-requisites: GIT 110, GIT 210, GIT 212
GIT	**313**	Technical Illustration and Photorealistic Rendering	Computer-generated graphics for technical illustration and design presentation: axonometric and perspective drawing; shading, shadowing, materials and textures; photorealistic rendering for PostScript output.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 110, GIT 230
GIT	**314**	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210, GIT 215, GIT 230
GIT	**333**	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digitial printing.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: GIT 135, 230, 303
GIT	**334**	Image Capture and Manipulation	Theory and application of image capture techniques used for all copy formats and conversion processes required for reproduction or dissemination.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 230
GIT	**335**	Computer Systems Technology	Computer technology: hardware, software, storage, networking, Internet, telecommunications, and information systems. Requires independent research.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Minimum 45 hours; Not for credit for the BS/GIT degree

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GIT	**337**	Web Content Design	Design principles for visual content on the World Wide Web using XHTML and CSS; raster, vector, fonts, portable documents, color palettes, and file format considerations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 135; GIT 210; GIT 215; GIT 230
GIT	**352**	Technical Presentations	Technologies for planning, creating, and delivering individual and group presentations.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**384**	Commercial Photography	Digital image capture, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 334
GIT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**411**	Computer Animation	2-D and 3-D computer animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 210; GIT 312
GIT	**413**	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337. Pre or Co-Requisite: TWC 400
GIT	**414**	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**415**	Computer Graphics: Business Planning and Management	Implementation planning: feasibility and application studies; needs assessment and operational analysis techniques; organization, managerial, and technology considerations; business plan development.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**417**	Advanced Internet Programming	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 337
GIT	**418**	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 215, GIT 230, GIT 214, GIT 417
GIT	**432**	Graphic Industry Business Practices	Business practices related to press/prepress/Web industries; trade customs, cost analysis, marketing and management approaches.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333; GIT 337
GIT	**435**	Web Management and E-Commerce	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 414
GIT	**436**	Gravure Technology	The technologies and processes involved in the production of gravure publications with an emphasis on the design, imposition, decoration, and finishing of packaging.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 334
GIT	**437**	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisite: GIT 334
GIT	**441**	Graphic Information Systems	Graphic information systems common to the workplace: graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
GIT	**450**	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: GIT 333, GIT 337
GIT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	FLD	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
GIT	**492**	Honors Directed Study		Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-6		
GIT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
GIT	**498**	Professional Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		
GIT	**537**	Current Issues in Quality Assurance	Directed group study of selected issues relating to quality assurance in the printing, publishing, and graphic information industries. Requires graduate group leadership.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)

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GIT	**538**	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**540**	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**541**	Graphic Information Systems	Graphic information systems common to the workplace; graphic user interfaces for online databases, geographic, industrial, architectural, and management applications.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**542**	Information Design and Usability	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Graduate student in Technology (Graphic Info Tech)
GIT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**301**	Business in the Global Environment	Discusses multinational corporate strategy, structure, operations, and the social and economic factors affecting global business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.	G	Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status.
GLB	**302**	Culture and Diversity Management	Develops an understanding of culture (individual, organizational, national, subcultural, transnational, and global) and change and interaction applied to management decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3-4		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**303**	Relationship Management	Overviews types of relationships found in organizations, then trains students in the interpersonal skills necessary to effectively manage those relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student with Professsional or Conditional status
GLB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**401**	Global Business Integration	Provides an integrative framework for global corporate strategic analysis and opportunities for integrated decision making in actual and simulated businesses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: Global Mgt student with professional status; Minimum 87 hours; OPM 301 and (FIN 300 or 301) with C or better; MKT 300 or 301 with C or better; GLB 303, HRM 410 or MGT 301 with C or better
GLB	**411**	Global Competitiveness	Discusses factors contributing to international competitive success of nation-states, national industries, and specific firms. Includes detailed analysis of actual firms.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	4.		Pre-requisites: School of Global Management and Leadership International Studies student with Professional or Conditional status; GLB 301 with C or better
GLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
GLB	**492**	Honors Directed Study		N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-6		
GLB	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
GLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
GLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: School of Global Management and Leadership International Studies student with Professional or Conditional status
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ & G	
GLG	**102**	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. fee. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & H	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
GLG	**104**	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	Co-requisite: GLG 102

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GLG	**106**	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SQ	
GLG	**108**	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.	SQ	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SG & G	
GLG	**111**	Geologic Disasters Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SG	
GLG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**305**	Dynamic Earth	Emphasizes the link between Earth's interior and surface, focusing on Earth systems and cycles, such as observation and modeling of the geometry and motions of Earth's rigid outer shell, the tectonic plates, and how they are coupled to the geologic record, the nature of Earth's internal structure, and convective motions within the planet. Specific topics include: (1) essentials of Earth's dynamic interior (models for physical and chemical evolution); (2) essentials of lithosphere evolution (cooling of oceanic plates, the age of the Earth, and continent formation); (3) multi-scale tectonics (plate tectonics, continental deformation, mountain building, tectonic context of metamorphism); (4) essentials of volcanism in a tectonic context; (5) geodynamic context of plate boundaries; and (6) chemical cycles (role of the solid crust and mantle for transporting, storing, and cycling water and minerals). Provides an essential global context for studies of Earth and Environmental Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 101and GLG 103 or SES 101 and SES 103; MAT 170 or higher; CHM 107 or higher, or PHY 101 or higher, or BIO 100 with a C or better
GLG	**310**	Structural Geology	Geologic structures and the mechanical processes involved in their formation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 101 AND either MAT 270 or MAT 290 with a grade of D or greater
GLG	**321**	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisites: CHM 113 and (MAT 270 or MAT 290); Pre/Co-requisite: CHM 116
GLG	**325**	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 101 or CHM 113 with C or better; BIO 100, BIO 182 or GLG 101 with C or better; Credit is allowed for only BIO or GLG 325

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GLG	**327**	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone--in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: (GLG 101 & GLG 103) or (SES 101 & SES 103) with C or better; MAT 170 or higher or PHY 101 or higher or CHM 107 (or 113 or 114), or BIO 100 or higher, all with a C or better
GLG	**362**	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**400**	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	P/F	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
GLG	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in geological sciences. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	C	
GLG	**404**	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**406**	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**410**	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	Pre-requisites: GLG 101 or SES 101 with C or better
GLG	**418**	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 310 with C or better; MAT 272 (or MAT 267); PHY 131
GLG	**419**	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: PHY 131
GLG	**420**	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**424**	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 321 with C or better
GLG	**430**	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: GLG 102 (or SES 102) with C or better; GLG 104 (or SES 104)
GLG	**435**	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Must have completed GLG 102 and GLG 321 with a grade of C or greater
GLG	**441**	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits. fee	N	FLD	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisite: GLG 424 with C or better
GLG	**451**	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	**452**	Field Geology II	Continuation of GLG 451. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	L	Pre-requisites: GLG 451 and GLG 321 with C or better; MAT 270 or MAT 290 with C or better
GLG	**455**	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona. Fee.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		
GLG	**460**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**464**	Solving Environmental Problems	Capstone course intended primarily for seniors in the Earth and Environmental Studies degree program. Hybrid self-study design project workshop guided by faculty, in which student teams research and develop plans for a viable solution to a real environmental problem in the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Earth and Environmental Sciences BA Senior students; GLG 305, GLG 325 or GLG 327 with C or better

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GLG	**470**	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**481**	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	**485**	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**490**	Topics in Geology	Special topics in a range of fields in geology. Fee.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Pre-requisites: Must be an Honors student
GLG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	**495**	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		
GLG	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		
GLG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
GLG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	**500**	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**581**	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GLG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GLG	**101**	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ & G	
GLG	**103**	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Fee. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	
GLG	**110**	Geologic Disasters and the Environment	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SG & G	
GPH	**111**	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants. Credit is allowed for only GPH 111 or 411. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**200**	Orientation to Geography	Basic introduction to the Department of Geography faculty, undergraduate graduation requirements, and possible jobs and skills in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
GPH	**210**	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	

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GPH	**211**	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	SQ	
GPH	**212**	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SQ	
GPH	**213**	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	SG	
GPH	**214**	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SQ	
GPH	**215**	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.	SG	
GPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**314**	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & G	Pre-requisites: 45 credit hours with C or better
GPH	**370**	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**371**	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**372**	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**373**	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.	CS	Pre-requisite: GPH 370 with C or better
GPH	**381**	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**401**	Topics in Physical Geography	Open to students qualified to pursue independent studies.	Y	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in discpline. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	
GPH	**405**	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**409**	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**410**	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
GPH	**412**	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111, MAT 270, PHY 121, and PHY 122 with C or better
GPH	**413**	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		

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GPH	**414**	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**418**	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
GPH	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: GPH 111 or BIO 187 (or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH or PLB 422
GPH	**433**	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	G	
GPH	**471**	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	
GPH	**473**	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	CS	Pre-requisites: Must have completed both GPH 373 and CSE 100 with a grade of C or greater or be currently enrolled
GPH	**474**	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	**475**	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**483**	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	**491**	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
GPH	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
GPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
GPH	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**505**	Energy and the Environment	Sources, regulatory and technical controls, spatial distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**511**	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation: emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GPH	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**573**	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**596**	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**601**	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals. Module 1 of the fall semester for MAS-GIS professional degree program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**602**	Intermediate GIS	Intermediate GIS for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**603**	Spatial Statistics and Modeling	Spatial statistics and modeling for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**604**	Implementation in the Corporate and Public Sectors	Uses GIS in the corporate and public sectors. GIS ethics. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**605**	GIS Project: Real-World GIS Project Planning and Implementation for Public Sector Agencies	GIS project development for the public sector. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**606**	Gis Project Presentation	Mastering technical project presentation for GIS professionals. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GPH	**610**	Programming the GIS Environment	Programming the GIS environment for the MAS-GIS program. Required for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**620**	Remote Sensing	Remote sensing for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**630**	Air Photo Interpretation for MAS-GIS	Air photo interpretation for the MAS-GIS program. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**640**	GIS for Business	Uses GIS in business for the MAS-GIS program.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**650**	GIS for the Internet	GIS for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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GPH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GPH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**101**	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**111**	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
GRA	**112**	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 111 with C or better
GRA	**121**	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 111
GRA	**122**	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 121 with a C or better; Co-requisite: GRA 112
GRA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**220**	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	**221**	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	**222**	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	**223**	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	**224**	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	**225**	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**321**	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design student; Co-requisite: GRA 361
GRA	**322**	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	**345**	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Graphic Design, Architecture, Interior Design, Industrial Design, Housing Community Development or Design Studies BA; ENG 102, 105 or 108 with C or better
GRA	**361**	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321

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GRA	**362**	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**401**	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**421**	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	**422**	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	**423**	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422
GRA	**424**	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: GRA 422 with C or better
GRA	**440**	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
GRA	**461**	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	**462**	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
GRA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
GRA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
GRA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
GRA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
GRA	**501**	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Master of Science in Design or Ph.D. Design student
GRA	**526**	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	**561**	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student

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GRA	**562**	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the syntheis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: DSC 561 with C or better
GRA	**563**	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**581**	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Master of Science in Design student
GRA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GRK	**101**	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
GRK	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GRK	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**201**	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: GRK 101 with C or better
GRK	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**301**	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 201 with C or better

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GRK	**302**	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: GRK 301 with C or better
GRK	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
GRK	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
GRK	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	**501**	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**503**	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**505**	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**506**	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Letters & Sciences	School of Letters and Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
GTD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**210**	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisite: ENG 102,105 or 108
HCR	**220**	Introduction to Nursing and Healthcare Systems	Introduces the social, political, and economic contexts in which the nursing profession and healthcare systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	H	
HCR	**230**	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	C & G	
HCR	**240**	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate Nursing students; BIO 201, BIO 202, CHM 101 or higher, MIC 205 and MIC 206 with C or better
HCR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HCR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		

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HCR	**550**	Principles of Epidemiology for Healthcare	Introductory graduate-level course intended to provide students with fundamental epidemiology concepts and methods which can be applied to their field of interest.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**557**	Research Design and Methods for Clinical Research and Regulatory Science	Focuses on the assessment of ethical design and methods used in clinical research and regulatory science; measurement issues in conducting research across diverse populations; relability, validity, bias and confounding; and appropriate statistical measurement and analysis for given study designs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student
HCR	**558**	Technical Writing for the Regulatory Professional	Focuses on teaching and applying writing and presentation skills critical for regulatory professionals	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student
HCR	**559**	Regulatory Science Internship	Internship in the field at a regulatory agency or in a regulated industry. Practicum.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	**560**	Regulatory Science Capstone	Culmination course integrating all components of regulatory core courses demonstrating knowledge and competency in the field of regulatory science.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	**561**	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**562**	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**563**	Clinical Research Management and Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**564**	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	DIS	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	**565**	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**566**	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**567**	Applied Cost-Effectiveness Analysis in Intervention Research	Principles and methods of cost-effectiveness analysis and the application to interpreting clinical trial and sociobehavioral intervention results	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Clinical Research Management Masters student or Nursing Graduate student
HCR	**568**	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Master's program or certificate program
HCR	**569**	Applied Principles of Data Management & Inferential Statistics in Healthcare Research	Applied principles of data management and inferential statistics in epidemiological, psychosocial, medical, nursing, and healthcare research. Seminar. Prerequisites: DNP 679; HCR 572; NUR 609; admission to Clinical Research Management Certificate(NUCRGRCC) or master's program (NUCRMMS), any graduate nursing program.	N	SEM	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Clinical Research Management Certificate or Master's program or any graduate Nursing program; NUR 609, DNP 679 and HCR 572 with D or better
HCR	**570**	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**571**	Cultural Diversity in Clinical Practice	Introduces culturally diverse aspects of clinical care, including culture bound syndromes folk practices, appropriate assessment approaches, and client/provider interaction.	N	DIS	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**572**	International Health Capstone Project	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**573**	Principles of Health Science Research	Orientation to translational health sciences research methods, creating transdisciplinary research terms, and implementing transdisciplinary translational research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student
HCR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HCR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HDA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7		
HDA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HDA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HDA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HDA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HDA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HDA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
HEB	**102**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: HEB 101 with C or better
HEB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**201**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 102 with C or better
HEB	**202**	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Pre-requisites: HEB 201 with C or better
HEB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**313**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Must have completed HEB 202 with a grade of C or greater or be currently enrolled
HEB	**314**	Advanced Modern Hebrew	Continued development of ability to communicate orally and in writing. Reading of selected literary works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Must have completed HEB 313 with a grade of C or greater or be currently enrolled
HEB	**375**	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
HEB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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HEB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
HEB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HEB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HEB	**101**	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
HED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
HED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
HED	**510**	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**527**	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**602**	Institutional Research/Strategic Planning	Provides an overview of policy research and planning in higher education at the campus system and governing/coordinating agency levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HED	**611**	Curriculum and Instruction	Curriculum development, instructional organization, and improvement of instruction in higher education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**620**	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**634**	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**644**	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**649**	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**668**	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
HED	**679**	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**687**	Governance, Coordination, and External Influences in Higher Education	Study of governance and coordination in higher education systems and the impact of external forces on them.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**688**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**689**	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**701**	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student

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HED	**702**	Critical Policy Issues In Higher Education	How great expectations in Washington are dashed in Oakland, Pressman and Wildavsky (1984) state that "policies imply theories--Whether stated explicitly or not, policies point to a chain of causation between initial conditions and future consequences." Policy can be broadly defined as a principal, plan, or course of action undertaken by governments, organizations, or individuals and designed to influence and determine decisions and actions. Many assumptions made by policy makers and other constituencies as well as competing social and political considerations shape the development of policy in higher education. Given the importance of federal and state public policy-making to higher education, we examine the effect of public policy on the functioning of colleges and universities and explore the various facets of public policy issues. Examines critical policy issues for higher education and the assumptions underlying their development.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**703**	Institutional Research and Evaluation in Higher Education	Higher education professionals (e.g., administrators, faculty, and researchers) are expected to develop an understanding of and appreciation for the role of research, analysis, and evaluation. Institutional research and evaluation are important functions in the advancement of colleges and universities. These functions help to maintain efficacy within educational organizations by providing vital data and analysis used in planning, decision-making, and policy development. Designed to develop a deep understanding of the contextual and practical applications of research and evaluation within higher education institutions. Students develop skills and execute techniques that are critical to conducting institutional research and evaluation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**704**	Qualitative Case Study Approaches For Policy Research In Higher Education	Provides advanced graduate students with instruction in qualitative case study research approaches as applied to questions of higher education policy. Emphasizes individual and group interviewing as techniques for qualitative case study data collection, coding, and analysis. Particularly useful for advanced doctoral students who plan to conduct a qualitative dissertation related to a higher education policy topic.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**705**	Ethics, Diversity, and Educational Leadership in Higher and Postsecondary Education	Students read and discuss recent writings on ethical decision making as related to the context of higher and postsecondary education. According to Shapiro & Gross (2008), "educational leaders have always had to make important decisions that affect the studies and lives of the next generation." St. John (2009) underscores the importance to ethical practice of understanding critical higher education issues in organizational practice, the gaps between moral beliefs and actions, and improving equity in organizations. Doctoral students review theoretical concepts related to ethical decision making and apply them to moral dilemmas in higher and postsecondary education leadership, policy-making, and organizational change.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**707**	Higher Education Institutional Types and Innovative Initiatives	Students gain an in-depth understanding of the various types of higher and postsecondary education institutions in the United States, including two-year and four-year colleges and universities, historically Black colleges and universities (HBCU's), Hispanic-serving institutions (HSI's), tribal colleges, women's colleges, faith-based colleges, and for-profit colleges. Covers current classification system used to group each institutional type. Examines the contribution of each institutional type to the development of American higher education, their current status, and potential futures. Studies exemplary programs, within various institutional contexts, that seek to address the academic needs of diverse student communities. Guest speakers and an out-of-state institutional site visit provide opportunities for students to interact with and learn from faculty and administrators within institutional contexts.	N	LEC	N	GNA	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HES	**301**	Adult Fitness I	Physical fitness and benefits of exercise. Emphasizes fitness assessment and designing an individualized assessment program. Y/E grade only. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Credit is allowed for only HES 301, EPE 301,325, 494, HES 301or HES 494
HES	**302**	Adult Fitness II	Continuation of HES 301. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 completed with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 302
HES	**303**	Adult Fitness III	Continuation of HES 302. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: HES 301 with Y grade; HES 302 with Y grade; Credit is allowed for only EPE 301, 325, 494 or HES 303
HES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
HHE	**510**	Theory of Healthcare Design	Theoretical problem solving and practical application strategies used in the design of healthcare and healing environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**524**	Contemporary Issues in Healthcare Design	Address contemporaneous healthcare design issues and challenges and propose theoretical solutions through evidence-based research. Seminar.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: HHE 510 and HHE 540 with B or better
HHE	**540**	Healthcare Design Typologies: Case Studies	Industry best practices and benchmarks for various types of hospital facilities and healthcare systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
HHE	**566**	Healing Experience Studio	Connects spatial relationships and patient needs through design. Investigates user experience of space on a personal level. Studio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HHE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HHE	**591**	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HHE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HHE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisite: Herberger Institute of Design and the Arts Graduate student

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HIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	**494**	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**171**	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisites: Honors students only; Total earned hours must be equal to or less than 75
HON	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Honors students only; Total earned hours must be equal to or less than 60
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**272**	The Human Event: Humanities Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on the humanities.	N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**273**	The Human Event: Science Focus	Continuation of HON 171 from the Renaissance through the modern period, with emphasis on scientific thought.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	L & H	Pre-requisites: HON 171 with C or better or currently enrolled
HON	**274**	The Human Event: Social Science Focus	Continuation of HON 171 from the Renaissance through the modern period; emphasizes the development of the social sciences.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or SB) & H	Pre-requisite: HON 171 with C or better
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		
HON	**298**	Honors Directed Study		N	LEC	N	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**310**	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**317**	Philosophers, Poets, and Revolutionaries in Latin America	A transdisciplinary honors course that introduces students to major intellectual currents in three regions of Latin America.	N	DIS	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**366**	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	FLD	Y	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & H & G	
HON	**372**	French Cultural Influences	Explores textual and cultural artifacts formative of French culture as a series of contacts and conflicts with other peoples and lifeways.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	(L or HU) & G	
HON	**378**	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & H & G	
HON	**379**	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.	HU & G	
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours

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HON	**410**	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	The Barrett Honors College	3.		
HON	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-12		Pre-requisite: Barrett Honors student
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisites: Honors students only
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**493**	Honors Thesis	Includes the leadership seminar.	N	LEC	N	Z1	Barrett, The Honors College	The Barrett Honors College	1-6	L	Pre-requisites: Honors students only; Total earned hours must be greater than or equal to 75
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		
HON	**497**	Honors Colloquium		Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-6		Pre-requisite: Honors students only
HON	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	The Barrett Honors College	1-7		Pre-requisites: Honors students only
HON	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-3		
HON	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	The Barrett Honors College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**311**	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU or SB	
HPS	**313**	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MAT 119 or higher; Minimum 30 hours; Credit is allowed for only HPS or PHI 313
HPS	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	**322**	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**323**	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H	
HPS	**325**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	HU & H & G	
HPS	**330**	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**331**	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	H	Credit is allowed for only BIO 318 or HPS 331
HPS	**332**	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**336**	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SB & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**340**	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for BIO 311 or HPS 340
HPS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**402**	Technology, Society, and Human Values	Values that motivate humankind to create technology. Areas of conflict and resolution of conflict between values and technology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
HPS	**410**	Professional Values in Science	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	
HPS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
HPS	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
HPS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, HPS, MBB, MIC, or PLB 495
HPS	**496**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, HPS, MBB, MIC, or PLB 496
HPS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
HPS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**512**	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**513**	Decisions and Strategies	Explores topics in decision theory, game theory, social choice theory, epistemology, and related fields. May be repeated for credit.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**550**	Methods in History and Philosophy of Science	Introduces current methods in the practice of history and philosophy of science. Organized around major historiographical schools in the history of science such as social, institutional, intellectual, cultural, or feminist history of science and current concerns in philosophy of science such as causation, explanation, modeling, and epistemology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**610**	History and Philosophy of Science Lab	This course brings together graduate students, postdocs, and faculty members in HPS. Sessions include panel discussions of HPS topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HPS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**210**	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	C	
HSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**300**	Complementary Healthcare	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: HSC 210 with D or better
HSC	**320**	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Sophomore, Junior or minimum 30 hours; PHI 101
HSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**420**	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: STP 226, PSY 230, PSY 231, POS 401, SOC 390, STP 231 or STP 420
HSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
HSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
HSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
HSD	**501**	Theories of Science and Democracy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**502**	Analysis of Knowledge and Expertise in Policy Decisions	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**503**	Analysis of Scientific and Technological Innovation	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**504**	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Graduate College	Graduate College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HSD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**601**	Core Seminar I	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Graduate College	Graduate College	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**602**	Core Seminar II	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Graduate College	Graduate College	4.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**610**	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions.	N	SEM	Y	OPT	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Graduate College	Graduate College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Graduate College	Graduate College	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSD	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Graduate College	Graduate College	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**220**	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	H	
HSM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	**493**	Honors Thesis		N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
HSM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	**502**	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**505**	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 561 or ECN 501 with C or better.
HSM	**512**	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**522**	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**542**	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better

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HSM	**561**	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**564**	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**565**	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**566**	Managerial Epidemiology II	Basic principles of epidemiology, evaluation of etiology, natural history, intervention therapy, and disease prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**575**	Health Policy Management and Evaluation	Provides students with the analytical techniques and real world experience to manage the implementation and evaluation of changes in health policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**578**	Managing Clinical Trials	Introduces students to theoretical and practical aspects of randomized controlled clinical trial methodology.	N	LEC	N	GRD	W.P. Carey School of Business	Department of Economics	3.		Pre-requisite: HSM 505
HSM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**589**	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.		Pre-requisites: HSM 502 with C or better
HSM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HSM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**106**	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**108**	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**111**	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only HST or REL 111
HST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**200**	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**201**	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**211**	American Jewish History	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**230**	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST, JST or REL 230
HST	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Pre-requisites: Students who have credit for SSH 301, or ASB 301 may not enroll in HST 301
HST	**302**	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**303**	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**304**	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**305**	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**306**	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**307**	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H	

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HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**310**	Film as History	Surveys moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
HST	**312**	History of Women in Science and Medicine	Examines history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**316**	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**321**	Constitutional Hist/US to 1965	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**323**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**326**	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Pre-requisites: AFS 200 or HST 109 or minimum 45 hours; Credit is allowed for only AFH 305 or HST 326
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**329**	Women in 20th-Century US West	Examines how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	H & C	
HST	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**333**	African American History to 1865	The African American in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H & C	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**335**	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: AFS 200 (or WST 100 or 300) or minimum 45 hours; Credit is allowed for only AFS 302, HST 335 or WST 302

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HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**347**	Ancient Greece	History and civilization of the Greek world from 650 BCE to the death of Alexander the Great.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**348**	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**349**	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**350**	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**351**	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**353**	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**354**	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**356**	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**357**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
HST	**358**	Jewish History from the Bible to 1492	Continuity and change in political, legal, economic, and sociocultural history of the Jews from biblical through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**359**	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	

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HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**366**	England to 1689	Political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**367**	Modern Britain	Political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**370**	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**371**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
HST	**372**	Modern Middle East	Impact of the West and modernization upon Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**376**	Modern Latin America	Nationalistic development of the independent republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**378**	Latin American Women: The National Period	Surveys the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**381**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
HST	**383**	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**384**	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**385**	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
HST	**386**	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
HST	**387**	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**388**	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**389**	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
HST	**390**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 390, PHI 390 or REL 314
HST	**391**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**405**	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	

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HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**407**	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H	
HST	**409**	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**410**	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**411**	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**412**	Contemporary U.S., 1973- Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or SB) & H & C	
HST	**423**	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**424**	Stuart Transform of England	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**426**	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**427**	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**428**	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**429**	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**431**	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**432**	East Euro/ the Balkans-20 Cent	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**435**	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**436**	The Soviet Experiment	Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former USSR.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**438**	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G & H	
HST	**443**	The United States & Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**445**	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	

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HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & H	
HST	**451**	Chinese Cultural History	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & H	
HST	**452**	Chinese Cultural History	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**453**	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	SB & G & H	
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU or SB) & H	
HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
HST	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	**496**	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper. Course themes may vary by instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: For South Asia track: REL 294, or SGS 294 (topic:Intro to South Asia) with C or better; for SE Asia track: HST 240,REL240, ASB 240, GCU 240, POS 240, or SGS 240 with C or better
HST	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**502**	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**511**	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HST	**515**	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**516**	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**525**	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**527**	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**532**	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**555**	Comparative Historical Topics	Analyzes a variety of specific social, political, cultural, and intellectual topics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: History MA or PHD student
HST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisite: History MA or PHD student
HST	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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HST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		Pre-requisite: History MA or PHD student
HST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & G & H	
HST	**108**	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	

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HST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**320**	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**322**	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**334**	African American History Since 1865	The African American in American history, thought, and culture from 1865 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**337**	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**338**	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C & H	
HST	**340**	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**350**	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**352**	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**355**	Total War & the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G & H	
HST	**362**	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**363**	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & H	
HST	**375**	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**400**	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**402**	Topics in European Regional and National History	Focuses on the history of specific geographic regions or nations in Europe.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**406**	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**413**	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H	
HST	**415**	Unequal Sisters/Women-Pol/Cult	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or SB) & H & C	
HST	**418**	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
HST	**419**	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
HST	**447**	Modern Mexico	Political, economic, social, and cultural developments from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & H	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	**454**	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G & H	
HST	**464**	Women in Europe to 1750	European women's diverse religious, ethnic, national and economic roles in society, culture, and politics in the pre-modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	Pre-requisites: ENG 102 or 105 with C or better; HIS 101 or 300 with C or better
HST	**465**	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU or SB) & H	
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	
HST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
HST	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-15		Pre-requisite: History MA or PHD student
HST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisite: History MA or PHD student
HST	**100**	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**101**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H & G	
HST	**102**	Western Civilization	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**103**	Western Civilization	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**104**	Western Civilization	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G & H	
HST	**107**	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**109**	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**110**	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	

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HST	**203**	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**204**	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**210**	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**300**	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education -History, students; Minimum 45 earned hours; ENG 102 or 105 with C or better
HST	**309**	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**313**	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**314**	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & H	
HST	**315**	Political History of the U S	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**316**	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**318**	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better
HST	**325**	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H & C	
HST	**327**	Women in US History 1600 to 1880	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**328**	Women in US History, 1880-1980	Examines American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & C & H	
HST	**341**	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	Credit allowed for only HST 341 or HIS 320
HST	**342**	US West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**343**	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**344**	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	
HST	**345**	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**361**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
HST	**364**	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**368**	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
HST	**372**	Modern Middle East	Impact of the West and modernization upon Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
HST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
HST	**408**	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H	
HST	**416**	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**444**	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**448**	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better
HST	**449**	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identify, and civil rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & H & C	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**450**	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G & H	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	**456**	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	

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HST	**480**	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit only for HST 480 or HST 530
HST	**481**	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better
HST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
HST	**492**	Honors Directed Study		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6		
HST	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	
HST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7	L	Pre-requisites: HST 194 completed or HIS 300, HST 300 or HST 200 with a C or better or currently enrolled; History student with senior standing or Education-History student with greater than 75 earned hours
HST	**530**	Methods of Teaching Secondary History	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 480 or HST 530
HST	**535**	Teaching Secondary Social Studies	Emphasizes secondary educational methods of planning, teaching, and assessing appropriate content in the instruction of social studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Credit is allowed for only HST 481 or HST 535
HTY	**220**	Introduction to Digital Archives	Familiarizes students with the uses and challenges of digital archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**230**	Introduction to Corporate Archives	Covers principles and techniques for creating and managing corporate archives.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
HTY	**246**	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Credit is allowed for only ENH 246 or HTY 246
HTY	**310**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
HTY	**312**	History of Science	Examines the beginnings of modern science and traces its development and impact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**314**	History of Computing	Examines the history of computing, including the development of computing devices, and the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**320**	History of American Agriculture	Overview of the history of agriculture in America from pre-contact to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**325**	History of American Business	The history of American business, including its evolution, structure, and values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108, or ENG 112 with a grade of C or better
HTY	**326**	History of Landscape Design	Examines the history of design traditions and landscaping from the ancient world to the present.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisites: ENG 102, ENG 105, or ENG 108 with a grade of C or better
HTY	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102,ENG 105, ENG 108, or ENG 112, with a C or better
HTY	**330**	History of Printing and Media	Examines the history of printing, books, and the development of modern forms of media.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**334**	Archival Preservation and Digital Media	Covers the preservation of digital archival data.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:HTY 220, or HTY 230 with a grade of C or better
HTY	**336**	Editing Historical Documents	Covers the principles and techniques for editing historical document collections.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requsites:ENG 102, 105, 108, or ENG 112, with a grade of C or better, and HST 300 or HTY 301 with a C or better
HTY	**346**	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENH 246 or HTY 246 with a C or better or currently enrolled
HTY	**360**	Women and Science	Examines the role of women in the sciences, focusing on their achievements, challenges, barriers, and persistence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**370**	History of Collecting	Historic overview of the practice of collecting art, artifacts, specimens, memorabilia. Includes classification and display systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**410**	Historic Preservation	Major topics of historic preservation, such as legislation, education. Includes principles of preservation and interpretation of artifacts and structures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:ENG 102, ENG 105, ENG108, or ENG 112 with a C or better; AND HST 300 with a C or better
HTY	**450**	History of Ecology and Conservation	Examines the historical development of ecology and conservation movements in the United States and the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L & H	Pre-requisites:ENG 102, 105, 108 or ENG 112 with a grade of C or better
HTY	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ENG 102 or its equivalent with a C or better or currently enrolled
HTY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		Pre-requisites: HTY 301 with C or better or currently enrolled; Senior academic level
HUD	**161**	Graphic Communication	Develops drawing skills and understanding of the graphic communication systems used by planning, homebuilding, and landscape architecture professions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpment student

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HUD	**201**	Introduction to Housing and Urban Development	Perspectives and issues concerning HUD. Guest lectures by interdisciplinary faculty and private, public, and non-profit practitioners.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**301**	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**302**	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**361**	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	**362**	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	**363**	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 301; HUD 361
HUD	**364**	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**401**	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**402**	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**403**	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
HUD	**461**	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	**462**	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Housing & Community Develpmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	**463**	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	**464**	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Housing & Community Develpmnt student; Co-requisites: HUD 402; HUD 462
HUD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisite: Housing & Urban Develpmnt BSD student
HUD	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
HUD	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
HUD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
HUD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HUM	**503**	Research and Writing in the Humanities	Systematic training in humanistic research and writing with particular attention to the interdisciplinary study of culture.	N	SEM	N	OPT	Liberal Arts and Sciences	Division of Humanities T	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**530**	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities T	3.		
HUM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HUM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HUM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HUM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HUM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Division of Humanities T	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
HUM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Division of Humanities T	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Division of Humanities T	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IA	**102**	Wood Turning		Y	LEC	Y	CNV	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		
IAP	**101**	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**102**	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	STO	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**103**	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**104**	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**105**	Foundations I: Fundamentals of Interdisciplinary Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary arts application.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	
IAP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**201**	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAP	**202**	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**301**	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**302**	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**303**	Artists and the Contemporary American Experience	Explores the life of the contemporary American artist with respect to individuality, pluralism, gender, race, ethnicity, and regionalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**304**	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**305**	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	

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IAP	**306**	Extended Traditions in Drawing	Explores alternative methods of rendering the drawn image. Emphasizes incorporating other art forms to inform students' individual work.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**307**	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAP	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**321**	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**322**	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**323**	Music and the Visual Arts	Histories and theories of music and visual arts with emphasis on convergences within 20th-century avant-garde traditions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**324**	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**325**	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: must be in Plan ASIAPBA
IAP	**331**	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**332**	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**333**	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**334**	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**335**	Vocalization and Movement	Study, application, and coordination of vocal projection techniques with bodily movement competencies in presenting original and existing contemporary performance works.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**351**	Concept, Image, and Text	The generation of images and metaphors using various media and visual stimuli.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**352**	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**354**	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Interdisciplinary Arts and Performance student
IAP	**355**	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**356**	Spatial Impressions	Investigates 3-D forms, the processes and concepts of physicality, and the environment with readings on spatial perception and cultural objects.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**360**	IAP Laboratory	Provides instructor-student contact time focusing on the technical instruction of media and technology applications.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1.		
IAP	**361**	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	CS	Pre-requisites: must be in PLAN ASIAPBA, or ASACOBS
IAP	**363**	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**364**	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**365**	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites:must be in Plan:ASIAPBA OR Plan: ASACOBS
IAP	**368**	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**371**	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**373**	The Critical Artist	Focuses on artists' critical thought, theorizing, and representation of art across disciplines and genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

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IAP	**421**	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work. Fee.	N	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**422**	Contemporary Orchestration Practices	Traditional and experimental scoring techniques for small and large ensembles using MIDI technology, digital samplers, and traditional instruments. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**431**	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**433**	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**434**	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**441**	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**442**	Movement and Music	Surveys ways artists have brought together movement and music in artistic creations in various disciplinary and interdisciplinary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Non-IAP majors only
IAP	**452**	Elements of Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**454**	New Directions in Painting	Develops painting skills and personal artistic vision through projects stimulated by other art forms. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**457**	Urban Narrative	Conceptually based studio focusing on artists' voices in contemporary urban environment with readings on spatial perception and cultural objects. Fee.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**464**	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**465**	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**466**	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN:ASACOBS
IAP	**467**	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**468**	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Must be in PLAN:ASIAPBA OR PLAN:ASACOBS
IAP	**469**	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**471**	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**472**	Theories of Arts and Performance	Key texts, thinkers, concepts, and approaches to the arts and performance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAP	**473**	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**474**	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
IAP	**480**	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3-6		
IAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAP	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		

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IAP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IAS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**220**	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAS	**300**	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	**305**	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	
IAS	**310**	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater, or be currently enrolled, or co-enrolled with IAS310.
IAS	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
IAS	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 406 or PHI 406
IAS	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
IAS	**410**	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	**415**	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**416**	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
IAS	**420**	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	**430**	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAS	**477**	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisite: ENG 101 or 105 with C or better
IAS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
IAS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
IAS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
IAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
IAS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
IAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**602**	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**604**	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**608**	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	**609**	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiolgical processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**660**	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**704**	Evidence-based Behavioral Interventions I: Core Skills	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**706**	Evidence-Based Behavioral Interventions II: Advanced Skills	Cover advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Focuses on both advanced behavioral interventions theory and practice and more complex diagnostic groups and related interventions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**712**	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	**714**	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**718**	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**720**	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**728**	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBC	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IBS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IBS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey MBA program students
IDN	**101**	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
IDN	**102**	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: IDN 101 with C or better
IDN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	**201**	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 102 with C or better
IDN	**202**	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: IDN 201 with C or better
IDN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IDN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IED	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
IED	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**401**	Navajo Language and Culture I	History and culture are added components to the introduction of language reading, writing, and speaking. Emphasizes basic communication and appreciation of history and culture.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**403**	Navajo Language and Culture II	Emphasizes communication, grammar, and sentence structures. Translations, reading, writing, and discussions of proper and slang language. Includes cultural activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**410**	History American Indian Educ	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 410 or 510.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB & H & C	Pre-requisites: Students who have credit for IED 510, may not enroll in IED 410
IED	**430**	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 430 or 530.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C	
IED	**433**	Counseling the Indian Student	Techniques and methods used in counseling, with emphasis on understanding Indian cultures and values. Experimentation with new counseling concepts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		
IED	**444**	Govt Role-Native Ed Pol/Adm	Examines the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty as they have shaped American Indian education. Analyzes administrative practices and personnel, program and fiscal management, and resources as they reflect the historic and present influence of this triad of factors. Credit is allowed for only IED 444 or 544.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	SB	
IED	**460**	Yaqui History and Culture	Yaqui history and culture ranging from precontact to the present. Larger themes of Yaqui identity, belief systems, family, traditions, community, resistance, dispersion, and survival.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	(HU or SB) & C & H	
IED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
IED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
IED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
IED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
IED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
IED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		

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IED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**510**	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society. Credit is allowed for only IED 510 or 410.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student. Students who have credit for IED 410, may not enroll in IED 510
IED	**530**	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective. Credit is allowed for only IED 530 or 430.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**544**	Govt Role-Native Ed Pol/Adm	Examines American Indian education and how it is impacted by the interrelationship of federal Indian policy, federal/state/tribal law, and tribal sovereignty. Credit is allowed for IED 544 or 444.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
IED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	**100**	Introduction to Engineering Design	Introduces industrial engineering design; teaming, the profession of engineering, computer models in engineering communication skills; quality and customer satisfaction. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	2.		Pre-requisites: Freshman or Sophomore standing
IEE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**210**	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: IEE 100(or BME100,CHE100,CEE100,CSE101, ECE100,EEE101,EGR101,FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	**220**	Business/Industrial Engr	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering student; Introduction to Engineering course with C or better (or ECE 100); Minimum Sophomore standing
IEE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**300**	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE student or Non Engineering student with a min GPA of 3.00; MAT 265, 270 or 290; Introduction to Engineering course
IEE	**305**	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: CSE 200 or 205 completed with a D or better or currently enrolled; Must either be an Engineering BS/BSE student or must be a Non-Engineering students with a minimum GPA of 3.00
IEE	**369**	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE students; IEE 300
IEE	**376**	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: CSE 200 or CSE 205; MAT 242, 342, or 343
IEE	**380**	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Engineering student; MAT 266 or 271 with C or better
IEE	**382**	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Industrial Engineering BSE student; Co-requisite: IEE 380
IEE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**405**	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering BS or BSE student
IEE	**431**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 431 or 541.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: senior; Fulton Schools of Engineering student
IEE	**437**	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines. Credit is allowed for only IEE 437 or 547.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE students OR Non Engineering students with a minimum GPA of 3.0
IEE	**461**	Production Control	Techniques for the planning, control, and evaluation of production systems. Project management, forecasting, inventory control, scheduling, enterprise requirements planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering BS/BSE student; IEE 376 or IEE 476; IEE 485; CSE 100 (or CSE 110)
IEE	**463**	Computer-Aided Manufacturing and Control	Computer control in manufacturing, CIM, NC, logic controllers, group technology, process planning, and robotics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	CS	Pre-requisites: Must be an Engineering BS/BSE student with Junior or Senior standing
IEE	**470**	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Industrial Engineering BSE student; IEE 376 with C or better; IEE 380 with C or better
IEE	**474**	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: IEE 380 with C or better
IEE	**475**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	4.	CS	Pre-requisites: Engineering BS or BSE students or Non-Engineering students with a minimum GPA of 3.00; CSE 205 and IEE 380 with a C or better
IEE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	**490**	Project in Design and Development	Individual or team capstone project in creative design and synthesis. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.	L	Pre-requisites: Engineering BS/BSE Senior; IEE 475; IEE 376 or IEE 476 with C or better

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IEE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Pre-requisites: Must be an Honors student.
IEE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Pre-requisites: Must be an Honors student
IEE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**505**	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**511**	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**512**	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**520**	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**530**	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**533**	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**534**	Supply Chain Modeling/Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**535**	Intro Intnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**541**	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication. Credit is allowed for only IEE 541 or 431.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Industrial Engineering MS/MSE/PHD student.
IEE	**545**	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic. Credit is allowed for only IEE 545 or 475.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be Engineering graduate student.
IEE	**547**	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors. Credit is allowed for only IEE 547 or 437.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Must be an Engineering graduate student.
IEE	**552**	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**561**	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student

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IEE	**563**	Distributed Info Systems	Introduces concepts and technologies that form the core of distributed enterprise information systems. Topics include client-server architectures, distributed objects and paradigms, Internet, World Wide Web, distributed information sharing, network programming, and e-commerce and enterprise applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS/MSE/PHD student; IEE 505 with C or better
IEE	**564**	Planning -Cmptr-Integrated Mfg	Theory and use of IDEF methodology in planning for flexible manufacturing, robotics, and real-time control. Simulation concepts applied to computer-integrated manufacturing planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**566**	Simulation in Manufacturing	Uses simulation in computer-integrated manufacturing with an emphasis on modeling material handling systems. Programming, declarative, and intelligence-based simulation environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**567**	Simulation System Analysis	Simulation modeling of processes involving discrete and continuous system components. Topics include random number generators, output analysis, variance reduction, and statistical issues related to simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 475 or 545 with C or better
IEE	**570**	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**571**	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**572**	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering graduate student
IEE	**573**	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**574**	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	**575**	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**576**	Analy Semiconductor Mfg Oper	Applies operations research and statistical methods to solve problems that involve semiconductor manufacturing operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**577**	Adv Information System Oper	Industrial engineering knowledge and skills for information system operations, includidng aspects (security,quality of service, user interface, information modeling), problems, and solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering Graduate student; IEE 505 with C or better
IEE	**578-M**	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		
IEE	**579**	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisite: Engineering Graduate student
IEE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**581**	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in design of experiements, statistical quality control, and regression analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**582**	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**585**	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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IEE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**620**	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**670**	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**672**	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	**677**	Regression/Genrlzd Linear Mod	Theory of linear models including least squares, maximum likelihood, likelihood-based inference. Generalized linear models including Poisson and logistic regression, generalized estimating equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 578 with C or better
IEE	**679**	Time Series Analy/Control	Identification, estimation, diagnostic checking techniques for ARIMA models, transfer functions, multiple time series models for feedback and feedforward control schemes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3.		Pre-requisites: Engineering MS, MSE or PHD student; IEE 579 with C or better
IEE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IEE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**564**	Multimedia Applications in Instruction	Utilizes various forms of multimedia and authoring software to create materials and instruction. fee	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**566**	Assessment and Evaluation of Media Applications	Examines a variety of strategies in assessing learning, collecting and evaluating data, and evaluating technology resources for classroom integration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**572**	Media Collection and Development	Explores the identification, selection, acquisition, and evaluation of a collection of library resources for a specific community of users.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**574**	Organization and Administration of School Library Media	Explores the role of the school library media specialist and program as it relates to the educational community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IMD	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
IMD	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
IMD	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
IND	**120**	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student
IND	**121**	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 122
IND	**122**	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; IND 120 with C or better; Co-requisite: IND 121
IND	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**227**	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	**228**	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	**236**	Intro Cmptr Model-Indust Dsgn	Computers in industrial design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; Passed Milestone
IND	**242**	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**243**	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**260**	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	**261**	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	**316**	20th-Century Design I	Modern European and American design from 1900 to 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**317**	20th-Century Design II	Modern European, Asian, and American design since 1940. Emphasizes transportation, product, furniture, exhibition, and graphic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
IND	**327**	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	**328**	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	**344**	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
IND	**354**	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Pre-Industrial Design or Industrial Design BSD student; PHY 111 with C or better
IND	**360**	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	**361**	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**460**	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	**461**	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.	L	
IND	**470**	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student

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IND	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
IND	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
IND	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
IND	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
IND	**544**	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
IND	**548**	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
IND	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**111**	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
INT	**120**	Design Drawing and Media	Visual thinking: Development of freehand drawing techniques as a language and tool to explore, communicate, and process ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student
INT	**121**	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	CS	Credit is allowed for only INT 121 or 320
INT	**123**	Introduction to Computer-Aided Design of Built Environments	Introduces AutoCAD computer-aided design principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**131**	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	SB	

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INT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**221**	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 120 with C or better; Co-requisite: INT 222
INT	**222**	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Interior Design student; Co-requisite: INT 221
INT	**223**	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	**253**	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 261 with C or better
INT	**261**	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	**262**	Interior Design Studio II: Hospitality	Focuses on environments that entertain or host the public, including but not limited to nightclubs, restaurants, theaters, hotels, city and country clubs, golf facilities, cruise ships and conference facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; INT 261 with C or better
INT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**310**	History of Interior Design I	Design of interior spaces as an expression of cultural influences to 1835.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: ARS 102 with C or better
INT	**311**	History of Interior Design II	Design of interiors as an expression of cultural influences from 1835 to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	Pre-requisites: Must have completed INT 310 with a grade of C or greater or be currently enrolled
INT	**320**	Computer Modeling for Design Studies	Computers in design management, including sofware concepts, specific packages, problem solving, illustration, modeling, and animation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Credit is allowed for only INT 121 or 320
INT	**341**	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; INT 261 with C or better
INT	**351**	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisite: INT 253
INT	**352**	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 362 and INT 381
INT	**354**	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	**362**	Interior Design Studio II: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments. Fee.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; Co-requisites: INT 341, INT 352 and INT 381
INT	**363**	Interior Design Studio III	Explores the poetics of materials and their assemblage in the design of public and private spaces. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	**381**	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisite: Urban Planning , Landscape Architecture BSLA, Graphic Design BSD, Interior Architecture BSD, Architectural Studies BSD, Housing & Urban Develpmnt BSD or Industrial Design BSD
INT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**412**	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	Pre-requisite: INT 311 with C or better

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INT	**413**	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	FLD	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: INT 412 with C or better
INT	**415**	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Minimum Junior standing
INT	**446**	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	**464**	Interior Design Studio IV: Work Environments	Studio problems in interior design-related issues in work environments. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	**465**	Interior Design Studio V: Institutional Design	Advanced interior design problem solving related to institutional facilities. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	**471**	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
INT	**472**	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	2.		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	**492**	Honors Directed Study		Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
INT	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
INT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
INT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
INT	**512**	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**513**	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**527**	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**529**	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
INT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
INT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**111**	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
ITA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
ITA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**311**	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**312**	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 202 with C or better
ITA	**315**	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 311, 312 with a grade of D or better, or enrolled, or ITA 314 with D or better or enrolled
ITA	**319**	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ITA 202 with C or better
ITA	**321**	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**322**	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: ITA 202 with C or better
ITA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**413**	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	**420**	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
ITA	**425**	Italian American Culture	Analyzes representations of Italian American history and culture in several media including literature, film, and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	
ITA	**430**	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarch, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**441**	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**443**	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled

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ITA	**446**	Italian Literature of the 18th and 19th Centuries	Goldoni, Parini, Alfieri, the poetry of Foscolo and Leopardi, and the sociohistorical novels of Foscolo, Manzoni, and Verga.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**449**	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites:ITA 325 with a grade of C or better or currently enrolled
ITA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
ITA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
ITA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ITA	**594**	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ITA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
ITA	**101**	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**102**	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.		
ITA	**201**	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
ITA	**202**	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture. fee	N	LEL	N	OPT	Office of the Provost	Office of the Provost	4.	G	
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		

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JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JAC	**101**	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0.		
JHR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	**501**	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**506**	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**510**	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**511**	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**525**	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Social Justice & Human Rights MA student
JHR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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JHR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JHR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JMC	**101**	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism courses. A test is offered during the first week of each semester's class so that students who feel they already have a mastery of grammar may attempt to test out.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication student
JMC	**110**	Principles and History of Journalism	Organization, function, and responsibilities of the media and adjunct services. Primary emphasis on newspapers, radio, television, and magazines. Credit is allowed for only JMC 110 or MCO 120.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student
JMC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Journalism and Broadcasting student
JMC	**201**	News Reporting and Writing	Basic news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: ENG 102, 105 or 107 and JMC 110 (or MCO 120) with C or better; JMC major; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
JMC	**301**	Intermediate Reporting and Writing (Print)	Intermediate news reporting and writing techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**305**	Online Media	Focuses on the Internet from the perspective of the journalist--the best way to tell a story using words, photos, video, and audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 with C or better; 2.5 cumulative GPA OR Graduate Mass Communication student
JMC	**310**	Public Relations	Theory and practice of publicity, public relations, and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**313**	Introduction to Editing	Copyediting and headline writing. Electronic editing on personal computer terminals. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better
JMC	**315**	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	L	Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**320**	Newscast Producing	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video. Students learn how to design, write, and supervise the television newscast. In practical lab experience, students produce a live 30-minute television newscast airing in greater Phoenix. As must be current on news of the day both locally and nationally, and be prepared to supervise other students in the news-gathering process.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites:Journalism major with a 2.50 GPA or higher; Pre-or co-requisites: JMC 315 and JMC 305 (JMC 425) with C or better if completed
JMC	**325**	Multimedia Reporting	Gives students practical experience working in an online, multimedia environment. Helps sharpen skills and gives them a real-world view of how journalism works in the 21st century.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 and ENG 102, 105 or 108 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**330**	Television Reporting	Writing, reporting and editing for television. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	**332**	Electronic Media Programming	Programming theory and evaluation, regulation, ethics, and responsibilities and basics of audience psychographics and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 200 (or MCO 200) with C or better; Minimum 2.50 GPA

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JMC	**336**	Station Operations	Basic understanding of the operations of a broadcast station. Examines internal organization structure and the relationship between each department.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 200 or MCO 200 with C or better
JMC	**345**	Videography	Develops an understanding of visual storytelling and how to craft a good, compelling story with pictures and sound. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA; JMC 201 with C or better
JMC	**351**	Photojournalism I	Basic camera, lighting, and scanning skills. Discusses ethics. Emphasizes shooting pictures for newspaper assignments on deadline. Students should have a 35mm (film) camera. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC students; JMC 201 with C or better; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101); Minimum 2.50 GPA
JMC	**366**	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre- requisites: JMC student; JMC 110 with C or better; Minimum 2.50 GPA; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists)
JMC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	**402**	Mass Communication Law	Legal aspects of the rights, privileges, and obligations of the press, radio, and television.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 201 and ENG 102 with C or better; Minimum 56 hours; Successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); Minimum 2.50 GPA
JMC	**412**	Editorial Interpretation	The press as an influence on public opinion. Role of the editorial in analyzing and interpreting current events.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Prerequisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**413**	Advanced Editing	Theory and practice of newspaper editing, layout and design, picture and story selection. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**414**	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Comm student; JMC 201 with a C or better or be currently enrolled; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 194 Grammar for Journalists); 2.50 cumulative GPA
JMC	**415**	Writing for Public Relations	Development of specific writing techniques for the practitioner in public relations agencies and divisions of major organizations. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**417**	Public Relations Campaigns	Theory, principles, and literature of public relations and how they relate to audiences, campaigns, and ethics.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**420**	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	**437**	Documentary Production	Emphasizes individual production projects of the student's own conception and design utilizing studio, field, and postproduction techniques. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.5 GPA; JMC 345 with C or better OR Graduate Mass Communication student
JMC	**440**	Magazine Writing	Writing and marketing magazine articles for publication. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	**445**	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**451**	Photojournalism II	Emphasizes shooting and Photoshop skills for newspaper and magazine assignments. Film and digital photography, flash and studio lighting. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communications student; JMC 351 with a C or better or currently enrolled; 2.5 minimum cumulative GPA OR Graduate Mass Communication student
JMC	**452**	Photojournalism III	Continued practice in shooting (film and digital) and Photoshop skills for newspapers and magazines. Emphasizes single images, picture stories, editorial illustrations, and portfolio development. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 451 with C or better OR Graduate Mass Communication student
JMC	**460**	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 425 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students
JMC	**465**	Precision Journalism	Advanced reporting methods using Internet research and data analysis tools for beat and investigative stories. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication student; JMC 301 with a C or better or currently enrolled; 2.50 minimum cumulative GPA OR Graduate Mass Communication students

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	**470**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles. Fee.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**472**	Media Management	Management principles and practices, including organization, procedures, policies, personnel problems, and financial aspects of station management.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; MCO 200 (or JMC 200) with C or better; Minimum 2.50 GPA OR Graduate Mass Comm student
JMC	**473**	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better
JMC	**475**	Television Newscast Production	Writing, reporting, and production of the television newscast. May be repeated once for credit. Fee.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student ; JMC 330 with C or better or currently enrolled; 2.50 cumulative GPA OR Graduate Mass Communication student
JMC	**478**	Cronkite News Service	Supervising editorial content of the television newscast. Focuses on writing, use of graphics, and video.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisites: Journalism and Mass Communication student; JMC 301 or JMC 330 with C or better
JMC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
JMC	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
JMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**101**	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201,202, 309,310,311,312,313,314,321
JPN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 102 with a C or greater or in progress & may not enroll in class if received a D or better in JPN 202,309,310,311,312, 313,314,321
JPN	**202**	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: JPN 201 with a C or greater or currently enrolled
JPN	**206**	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: JPN 101 with C or better
JPN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**301**	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: JPN 202 with C or better

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JPN	**302**	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 301 with C or better
JPN	**309**	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 202 with C or better
JPN	**310**	Japanese Oral Communication II	Continued development of oral/aural sills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 309 with C or better
JPN	**311**	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 202 with C or better
JPN	**312**	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: JPN 311 with C or better
JPN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**401**	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	Pre-requisites: JPN 302 and SLC 202 with C or better
JPN	**414**	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 with a grade of C or better
JPN	**415**	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 414 with C or better
JPN	**445**	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	**485**	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
JPN	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
JPN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**535**	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 445 or 535
JPN	**543**	Japanese Language and Linguistics	Analysis and discussion of linguistic theories applied to Japanese phonology, morphology, and syntax, including psychological, sociological, and historical aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**585**	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only JPN 485 or 585
JPN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JPN	**102**	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novlice-Mid to Novice-High. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.		
JPN	**201**	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary. Fee.	N	LEL	N	OPT	Office of the Provost	Office of the Provost	5.	G	
JST	**210**	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	Credit is allowed for only JST 210 or REL 210
JST	**230**	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST, JST or REL 230
JST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
JST	**491**	History of Anti-Semitism	Anti-Semitism means hostility, negative perceptions, and persecution of Jews. Examines the evolution of anti-Semitism in the West from antiquity to modern times. Explains the history of anti-Semitism by looking at the interplay of religious, economic, cultural, and political factors. Special attention given to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of anti-Semitism, ponders the differences and similarities between premodern anti-Judaism and modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 230 (or REL 210) with C or better
JST	**495**	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better

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JST	**496**	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JUS	**105**	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 105 or 305. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Open to undergraduate students who have not received credit for JUS 305; Justice Studies students must have 56 or less earned hours
JUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites:Must have less than or equal to 25 earned hours
JUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	**200**	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**207**	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	
JUS	**214**	Justice Institutions	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	
JUS	**222**	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	**301**	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**302**	Basic Statistical Analysis in Justice Studies	Introduces the fundamentals and application of descriptive and inferential statistics, with emphasis in the justice area.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	CS	Pre-requisites: Must have completed Intermediate Algebra or higher; Justice Stds student OR 2.0 GPA and 25 earned hours and specific students as determined by Justice Stds Depart. OR 2.0 GPA and more than 56 hours and not be a Justice Stds student.
JUS	**303**	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**305**	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Credit is allowed for only JUS 305 or 105. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**306**	Police and Society	Focuses on community policing; critical inquiry of administrative decision making; perspectives on police-citizen violence; street practices; urban policing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**308**	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**320**	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**321**	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**323**	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA

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JUS	**325**	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**329**	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**332**	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**335**	Organized Crime	Nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**350**	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**352**	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**360**	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**374**	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**375**	Justice and the Mass Media	Surveys the impact of mass media and popular culture on social justice, including criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: 56 earned hours; 2.0 GPA; Non-Justice Stds student or specific students determined by Justice Stds Dept. OR a professional undergraduate Justice Studies student
JUS	**382**	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**385**	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 24 semester hours; minimum 2.00 GPA
JUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 2.00 GPA; minimum 12 semester hours; If Justice Studies student, must be enrolled or earned J-1 Core Status or earned Capstone Status
JUS	**405**	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**408**	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**410**	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**415**	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**420**	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA

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JUS	**422**	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**425**	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**430**	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**432**	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**435**	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**438**	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**444**	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**445**	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**450**	Alternatives to Incarceration	Investigates various alternatives to incarceration; advantages/disadvantages; major issues including net widening, cost effectiveness, risk assessment, community crime prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**452**	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social ,and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**460**	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**463**	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**465**	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**467**	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**469**	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**470**	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	**474**	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**477**	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**479**	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student

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JUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with a C or better; minimum 36 semester hours; minimum 2.50 GPA
JUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Pre-requisites: Must be an Honors student
JUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Justice Studies MS or PHD student
JUS	**501**	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**503**	Crime and Social Causation	Theories of deviance and crime as they relate to social policies and specific response of the justice complex.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**509**	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**521**	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**542**	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**550**	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**555**	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**560**	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**570**	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**575**	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**579**	Political Deviance	Seminar examines the politics of deviance by integrating the study of conflict with aspects of social organization, especially state formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**588**	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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JUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**610**	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**620**	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	**630**	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	**640**	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	**650**	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Justice Studies MS or PHD student
JUS	**660**	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student
JUS	**669**	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
JUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
KE	**211**	Chemical Process Calculations		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	2.		
KE	**461**	Process Control		Y	LEC	Y	CNV	Ira A. Fulton Engineering	Chemical Engineering Program	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**100**	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**101**	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**105**	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**110**	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		Pre-requisites: Must be a student in one of the following: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology.
KIN	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
KIN	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**205**	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week. Fee.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**310**	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
KIN	**334**	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed BIO 201 or ZOL 201 with a grade of C or greater or be currently enrolled; Must have completed BIO 202 with a grade of C or greater or be currently enrolled
KIN	**335**	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 201 (ZOL 201) and BIO 202, PHY 111, and KIN 101 (or KIN 200) with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with a C or better
KIN	**340**	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200), BIO 201 (ZOL 201) and BIO 202 (ZOL 202) with C or better; one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	**345**	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: KIN 101 (or KIN 200) with a C or better; PGS 100 or PGS 101 with a C or better; BIO 201 (ZOL 201) with a C or better
KIN	**348**	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	
KIN	**352**	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C	Pre-requisites: KIN 101 (or KIN 200) with C or better; PGS 100 or PGS 101 with C or better
KIN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
KIN	**412**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed KIN 335 with a grade of C or better; If you received credit in KIN 512, you may not enroll in KIN 412
KIN	**413**	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 335 or KIN 335 with a grade of C or greater or be currently enrolled in KIN 335
KIN	**414**	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 335, KIN 335 or PED 335 with a grade of C or greater or be currently enrolled in KIN 335; Must have completed EPE 240, KIN 340 or PED 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**421**	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**422**	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**423**	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 345 or KIN 345 with a grade of C or greater or be currently enrolled in KIN 345
KIN	**440**	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 532, may not enroll in KIN 440
KIN	**441**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater in KIN 340. Students who have credit for KIN 531, may not enroll in KIN 441

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	**442**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 442 or 536.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater in KIN 340. Credit is allowed for only KIN 442 or 536.
KIN	**443**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or better in KIN 340. Students who have credit for KIN 533, may not enroll in KIN 443
KIN	**444**	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed EPE 340, PED 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**445**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 445 or 535.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**448**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 520, may not enroll in KIN 448
KIN	**450**	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed either EPE 352 or KIN 352 with a grade of C or greater or be currently enrolled in KIN 352
KIN	**452**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: Must have completed EPE 352, PED 352 or KIN 352 with a grade of C or greater in KIN 352. Students who have credit for KIN 522, may not enroll in KIN 452
KIN	**460**	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Must have completed either EPE 340 or KIN 340 with a grade of C or greater or be currently enrolled in KIN 340
KIN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
KIN	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		Pre-requisites: Must be an Honors student
KIN	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
KIN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Academic Level may not equal Freshman
KIN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Must be BS Kinesiology student; Seniors only
KIN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
KIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**512**	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512
KIN	**520**	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	**522**	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	**530**	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**531**	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	**532**	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	**533**	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	**535**	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child. Credit is allowed for only KIN 535 or 445.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking)
KIN	**536**	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise. Credit is allowed for only KIN 536 or 442.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be a Post-Bacc Undergrad or a Graduate student (Non-degree or degree seeking). Students who have credit for KIN 442, may not enroll in KIN 536

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KIN	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
KIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**598**	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**621**	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
KIN	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
KOR	**101**	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and wrtiting skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
KOR	**102**	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisite: KOR 101
KOR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**201**	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 102
KOR	**202**	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites: KOR 201
KOR	**250**	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	

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KOR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**313**	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety or Korean written styles.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 202
KOR	**314**	Third-Year Korean II	Continuation of KOR 313.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: KOR 313
KOR	**347**	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	
KOR	**350**	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	H	
KOR	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
KOR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
KOR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
KOR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
KOR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LAA	**345**	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	**485**	International Field Studies in Landscape Architecture	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LAP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LAP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LAT	**101**	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
LAT	**102**	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: LAT 101
LAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**201**	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 102
LAT	**202**	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	HU	Pre-requisites: LAT 201
LAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**421**	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**422**	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: LAT 202
LAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
LAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
LAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	**105**	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3.		
LAW	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1.		Pre-requisites: Freshman standing
LAW	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**515**	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**516**	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**517**	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**518**	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	**519**	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**522**	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**523**	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**524**	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**529**	Law and the Regulatory State	Introduces the importance, origins, and methods of interpreting statutes, regulations, and court rules.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3.		
LAW	**581**	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	College of Law	Sandra Day O'Connor College of Law	1-12		

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LAW	**596**	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	**597**	Visiting Student Program		N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**601**	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**602**	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	**603**	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LAW	**604**	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**605**	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**606**	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	**607**	Nanotechnology Law and Policy	Provides an overview of the legal and policy issues relating to nanotechnology, including risk management, national and international regulations, intellectual property, privacy issues, and liability issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**608**	Business Associations I	Partnerships, limited partnerships, and small business corporations. Includes a brief introduction to accounting. Detailed analysis of the problems of forming a close corporation, state law duties of care and loyalty, management, dividends and redemptions, issuance of stock, internal dispute resolution, dissolution, and the general law of derivative actions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	**609**	Business Associations II	Interrelationship of federal and state law and a brief introduction to corporate finance (1933 Act). Broad overview of large company regulations including reporting rules, proxy regulation, insider trading, sale of control, tender offers and takeovers, and going private.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisites: College of Law student
LAW	**610**	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**611**	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Must be College of Law student
LAW	**612**	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**613**	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**614**	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**615**	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**616**	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**617**	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**618**	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**619**	Payments	Law of credit obligations and payment devices. Focuses on Articles 3, 4, and 4A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**620**	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**621**	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**622**	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**623**	Commercial Torts	Involves an analysis of actionable wrongs against a business entity or against proprietary rights held by that entity, covering the entire spectrum of private remedies for competitive wrongs.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**624**	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	**625**	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**626**	Advanced Legal Writing	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Must be Juris Doctor Candidate (LWJDJD); Students who have credit for LAW 634, may not enroll in LAW 626
LAW	**627**	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**628**	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**629**	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**630**	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**631**	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**632**	Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**633**	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**635**	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**636**	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**637**	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	4.		Pre-requisite: College of Law student
LAW	**638**	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student

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LAW	**639**	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**640**	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**641**	Securities Regulation II	Securities laws affecting the purchase and sale of publicly traded securities.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**642**	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**643**	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**645**	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**646**	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3.		Pre-requisite: College of Law student
LAW	**647**	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**648**	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**649**	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**650**	Health Law	Introduces health law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**651**	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**652**	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**653**	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**654**	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	**655**	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**656**	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**657**	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**658**	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre Requisites: Law Students Only
LAW	**659**	Intellectual Property Portfolio Management	Covers business/law dynamics in the technology sector.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**660**	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**661**	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**662**	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**663**	Prisoner Rights	Provides overview and basic understanding of the rights of prisoners within the United States penal system. Emphasizes prisoners¿ civil rights under the U.S. Constitution and 42 U.S.C. Section 1983, including claims such as access to courts, conditions of confinement, religious freedoms, excessive use of force, ineffective medical assistance. Analyzes prison culture and models for reform, state post-conviction rights of appeal, the death penalty, parole, and commutation. Includes optional tour of a maximum security prison (which is much different from the county jail tour) and guest speakers (correctional officers and former inmates).	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**664**	Intellectual Property	Surveys the laws conventionally grouped as ¿intellectual property,¿ with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**665**	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**667**	FDA Regulation	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	GRD	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**697**	Visiting Student Program		N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	0.		
LAW	**701**	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**702**	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**703**	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**704**	Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**705**	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**706**	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**707**	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**708**	Gender, Sexuality, and the Law	Examines assumptions made in the law about gender and sexuality and the impact of those assumptions on the application of the law.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**709**	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**710**	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**712**	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**713**	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**715**	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**718**	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	**719**	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**720**	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**721**	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**722**	Mexican Law	Comparative overview of Mexican law. Poses questions regarding the proper role and function of a legal system.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**723**	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**724**	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**725**	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**733**	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**734**	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	**735**	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	**736**	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**737**	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group¿s goals. In addition to analyzing the definition of a ¿cult,¿ the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members¿ families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	**738**	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	**739**	Economics and the Law Seminar	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**745**	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	**768**	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	**770**	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal. May be repeated for credit for a maximum of 5 semester hours.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**771**	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	**772**	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		

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LAW	**773**	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**774**	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**775**	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	N	OP5	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**776**	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**777**	Innovation Advancement Legal Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite is LAW student
LAW	**778**	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	N	OPT	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**781**	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite is LAW student
LAW	**782**	Independent Study	See LAW 781.	N	IND	N	OPT	College of Law	Sandra Day O'Connor College of Law	2.		
LAW	**783**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	**785**	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	**795**	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1.		
LAW	**797**	Visiting Student Program		N	LEC	N	LAW	College of Law	Sandra Day O'Connor College of Law	0.		
LDE	**361**	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture students only; Co-requisites: LTC 343
LDE	**362**	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	**363**	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	**461**	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	**462**	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems. fee	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	5.		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
LDE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
LDE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		

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LDE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LDE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LDE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LES	**305**	Legal, Ethical, and Regulatory Issues in Business	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey BA or BS student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, OR be a non-degree student with minimum 2.5 ASU cum GPA, OR be a graduate student.
LES	**306**	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-Requisites:Student in Accountancy; Global Management student in Conditional or Professional Business status

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LES	**380**	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR Non degree or Grad student.
LES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	**411**	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
LES	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
LES	**532**	Negotiation Agreements	Develops negotiation competencies to build partnerships and create lasting agreements with internal/external customers, suppliers, work teams, and external constituencies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: MBA student
LES	**579**	Legal and Ethical Issues for Business	Managerial decision making within the bounds of ethics, social responsibility, and legal and regulatory constraints. Strong international focus.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA student
LES	**581**	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LES	**582**	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LES	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LES	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LES	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Pre-requisites: Must be an Honors student
LIA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		
LIA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIM	**301**	International Organizational Behavior	Educates students to lead others in the intra- and interorganizational relationships in multinational firms operating in complex global environments. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management and Leadership student in the Leadership in International Management plan with either a Professional or Conditions status.
LIM	**303**	Negotiation and Conflict Resolution Strategies Across Cultures	Explores the impact of cultural differences on international negotiations and subsequent application of this knowledge to conflict resolution processes. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
LIM	**401**	Advanced Topics in International Leadership	Provides an overview of the most current leadership theories and practices to develop students as leaders in crosscultural contexts. May be repeated once for credit.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		
LIM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: must be a School of Global Management student in the Leadership in International Management plan with either a Professional or Conditional status AND completed LIM 301 with a grade of C or greater or be currently enrolled.
LIM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		
LIM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		
LIN	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**510**	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	**511**	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**513**	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**514**	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**515**	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**516**	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**517**	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	**520**	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**521**	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**522**	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**523**	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**524**	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**610**	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**614**	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**615**	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**616**	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**617**	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**620**	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**655**	Disciplinary Discourses	Investigation of professional and disciplinary issues related to English studies.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**656**	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIN	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LIS	**533**	Current Library Problems	Critical analysis of current practices and problems in school librarianship.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student

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

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LPH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**310**	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU & H	
LPH	**311**	Contemporary Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
LPH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**411**	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LPH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LPH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LPH	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**241**	Human Genetics	Introduces basic concepts of human heredity and cytogenetics, including Mendelian, molecular, and population genetics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**322**	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)

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LSC	**347**	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) and CHM 116 with C or better
LSC	**348**	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisites: must have completed BIO 181 (or BIO 188), BIO 182 (or BIO 187), CHM 113, and CHM 116 with a grade of C or greater and be co-enrolled in LSC 347.
LSC	**350**	Premedical Professional Seminar	An opportunity for students who anticipate a career in any area of medicine to explore the realities of the field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 or 188, BIO 182 or 188, BIO 353 or LSC 353, and BIO 340 or LSC 347 with C or better
LSC	**354**	Developmental Anatomy Lab	Experimental studies of developmental processes in animals. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**359**	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	**362**	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
LSC	**363**	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), BIO 340 (or LSC 347), LSC 353 and CHM 234 with C or better
LSC	**365**	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SG	
LSC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**430**	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), and CHM 116/115 with C or better
LSC	**432**	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: must have completed either BIO353, LSC353, or LSC359 with a grade of C or greater or be currently enrolled.
LSC	**434**	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; LSC 320 or BIO 320 with C or better
LSC	**447**	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**450**	Premedical Externship	Provides hands-on experience in a hospital setting for premedical students.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: LSC 350 with C or better
LSC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		
LSC	**486**	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		
LSC	**492**	Honors Directed Study		N	IND	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6		
LSC	**493**	Honors Thesis		N	IND	N	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-6	L	Pre-requisites: Must be an Honors student
LSC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
LSC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-7		
LSC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	P/F	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
LSC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	DIS	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LSC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**343**	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Co-requisites: LDE 361
LTC	**344**	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**446**	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
LTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
LTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
LTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MA	**513**	Algebraic Topology	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		

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MAE	**100**	Introduction to Mechanical and Aerospace Engineering	Introduces mechanical and aerospace engineering, design process, teaming, the profession of mechanical and aerospace engineering, computer models in engineering, communication skills, CAD tools, and programming tools. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites: Aerospace or Mechanical Engineering student
MAE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student
MAE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**212**	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mech & Aero student; PHY 121 C or better; Pre/Co-requisite: MAT 274 or 275 C or better OR Non Mech & Aero student; PHY 121; Pre/Co-requisite: MAT 274 or 275
MAE	**213**	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: CEE 210, CEE 211 or MAE 212 with C or better; MAT 274 (or 275) with C or better
MAE	**214**	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	**240**	Thermofluids I	Introductory concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Mechanical & Aerospace Engineer or Fulton BSE student with MAE 212 with C or better or Non MAE student with CEE 212 (may be co-enrolled) or MAE 212 with C or better
MAE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**298**	Honors Directed Study		N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**313**	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 318 and MAE 360 with C or better
MAE	**318**	Sensors and Controls	Introduces measurement systems, feedback control modelling and dynamics of physical systems, computer simulations and real-time experiments. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5.		Pre-requisites: Mech or Aero BSE student; MAE 212 or CEE 211 with C or better; EEE 202 with C or better
MAE	**322**	Structural Mechanics	Three-dimensional stress analysis, failure theories, energy methods, finite elements, torsion of noncircular members, unsymmetrical bending, beam column, fatigue and fracture. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: MAE BS/BSE student; MAE 213 with C or better, MAT 343 with C or better; Pre/Co-requisite: MAE 384 (with C or better if completed)
MAE	**323**	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2.		Pre-requisites; MAE BSE students; MAE 214 with C or better, MAE 322 with C or better
MAE	**340**	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 240 with a C or better; Pre/Co-requisite: MAE 384
MAE	**341**	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS or BSE students; MAE 212 with a C or better
MAE	**342**	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; MAE 322 with C or better; Pre/Co-requisite: MAE 318 (with C or better if completed)
MAE	**344**	Fundamentals of Aerospace Design	Design theory and design tools applied to aerospace engineering. Engineering drawings, solid modeling, RFP's, Federal Aviation Regulations and military specifications, aircraft sizing, rapid prototyping. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MAE 214, 322, 360 and 384 with a C or better
MAE	**345**	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 213 and MAE 384 with C or better; Pre or Co-requisites: MAE 318 (with C or better if completed) and MAE 384 (with C or better if completed)
MAE	**351**	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	**360**	Aerodynamics	Airfoils and wings, ideal flow, panel methods, boundary layers, finite-difference solutions, wind-tunnel testing. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 with C or better; ENG 102, 105 or 108 with C or better; MAE 384 or CEE 384 with C or better or Co-requisite: MAE 384

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MAE	**362**	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both MAE 362 and MAE 360 must be taken to secure L General Studies credit. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.	L	Pre-requisites: Engineering BS/BSE students; MAE 240 and MAE 384 with C or better
MAE	**372**	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 with C or better
MAE	**382**	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students;MAE 240 with C or better
MAE	**384**	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	CS	Pre-requisites: Engineering BS/BSE student; MAT 274 or 275 with C or better; MAT 242 or MAT 343 (or MAT 342 for Non-MAE student) with C or better; Pre or Co-requisite: MAT 272 or MAT 267 (with C or better if completed);Credit only for MAE 384 or CEE 384
MAE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Engineering BS/BSE student
MAE	**400**	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Aerospace Engineering or Mechanical Engineering BSE Seniors; MAE 342 or MAE 362 completed with a C or better
MAE	**404**	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 or ECE 313 with C or better; CEE 384, MAE 384 or ECE 384 with C or better
MAE	**406**	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	**415**	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 213 with C or better; CEE 384 or MAE 384 with C or better
MAE	**417**	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**426**	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 322 with C or better
MAE	**434**	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 382 with C or better
MAE	**436**	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; Credit is allowed for only MAE 436 or 536
MAE	**442**	Mechanical Systems Design	Applies design principles and techniques to the synthesis, modeling, and optimization of mechanical, electromechanical, and hydraulic systems. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 342 or MAE 344 with C or better
MAE	**446**	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 with C or better; MAE 382 with C or better
MAE	**447**	Robotics and Its Influence on Design	Robot applications, configurations, singular positions, and work space; modes of control; vision; programming exercises; design of parts for assembly.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**455**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better; Credit is allowed for only MSE 470 or 455
MAE	**462**	Space Vehicle Dynamics and Control	Attitude dynamics and control, launch vehicles, orbital mechanics, orbital transfer/rendezvous, space mission design, space structures, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better
MAE	**463**	Propulsion	Fundamentals of gas-turbine engines and design of components. Principles and design of rocket propulsion and alternative devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 362 with C or better; MAE 384 with C or better
MAE	**465**	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE plans; MAE 340 or MAE 362 with C or better; MAE 462 with C or better

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MAE	**466**	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 360 with C or better; Credit is allowed for only MAE 466 or 566
MAE	**468**	Aerospace Systems Design	Group projects related to aerospace vehicle design, working from mission definition and continuing through preliminary design. Fee.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 313 and MAE 344 with C or better; Pre/Co-requisite: MAE 400 and MAE 463 with C or better if completed.
MAE	**469**	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student
MAE	**471**	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 340 or MAE 360 with C or better; MAE 384 or ECE 384 with C or better; Credit is allowed for only MAE 471 or 561
MAE	**480**	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design. Integrated lecture/lab.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE student; C or better in MAE 214, MAE 345, MAE 465, and EEE 304, or be co-enrolled in EEE 304
MAE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	**488**	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; C or better in MAE 318; MAE 340; MAE 342; and MAE 384
MAE	**489**	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering BS/BSE students; MAE 488 with C or better
MAE	**491**	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.	L	Pre-requisites: Engineering BS/BSE students; MAE 318 with C or better; MAE 340 with C or better
MAE	**492**	Honors Directed Study		N	PRA	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		
MAE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Pre-requisites: Must be an Honors student.
MAE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Pre-requisites: Engineering students
MAE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**501**	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**502**	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students only
MAE	**504**	Experimental Methods for Thermal and Fluid Processes	Theory and application of optical diagnostics and microsensors for characterizing thermofluid processes. Measurements include laser spectroscopy, velocimetry, particle sizing, and surface properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**505**	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	**506**	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 501 with C or better.

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MAE	**507**	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; MAE 506 with C or better
MAE	**510**	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students
MAE	**512**	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisites: Graduate Engineering student; CEE 536, MAE 510 or MAE 515 with C or better or currently enrolled
MAE	**515**	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 completed with a C or better or currently enrolled
MAE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Fulton Engineering Graduate students; Credit is allowed for only CHE 518, EEE 518, MSE 475, MSE 518 or MAE 518
MAE	**520**	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**521**	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	**523**	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; CEE 521 or MAE 520 with C or better
MAE	**524**	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 520 with C or better
MAE	**525**	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 510 with C or better
MAE	**527**	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 501 with C or better
MAE	**536**	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	**540**	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**541**	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**544**	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**546**	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	**547**	Mechanical Design and Control of Robots	Homogeneous transformations, 3-D kinematics, geometry of motion, forward and inverse kinematics, workspace and motion trajectories, dynamics, control, and static forces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**557**	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**561**	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering students; Credit is allowed for only MAE 471 or 561
MAE	**564**	Advanced Aerodynamics	Perturbation method. Linearized subsonic and supersonic flows. Thin wing/slender body theories. Lifting surface theory. Panel method computation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**566**	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum, blade-element, and vortex methods. Hover and forward flight. Ground effect, autorotation, and compressiblilty effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566

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MAE	**571**	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**572**	Advanced High-Speed Flows	Introduces compressible flow. Sound waves and normal shock waves. Quasi-one-dimensional steady flows in variable area ducts with friction, heating, and cooling; unsteady one-dimensional flow, oblique shock waves, Prandtl-Meyer expansions, detonation waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**573**	Viscous Fluid Flow	Mechanics of fluids for flows in which the effects of viscosity are significant. Exact and approximate solutions of the Navier-Stokes system, laminar flow at low and high Reynolds number.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 completed with C or better or currently enrolled
MAE	**574**	Fluid Transport in Micro/Nanoscale Devices	Focuses on fundamental fluid transport physics in micron and nanometer scale devices. At small length scales fluid motion and transport is governed by electromagnetic, interfacial, and stochastic phenomena that differentiate these flows from typical macroscale flows. In microscale devices these phenomena enable new and high-performance separation, concentration, control, and diagnostic processes. Core concepts are presented along with discussions of state-of-the-art micro and nanoscale total analytical devices. Requires knowledge of fluid mechanics, electrostatics, heat and mass transfer, and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Fulton School of Engineering graduate students only
MAE	**575**	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**577**	Turbulent Flow Modeling	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	**578**	Geophysical and Environmental Fluid Dynamics	Dynamics of large-scale flows under the influence of stratification and earth rotation. Thermally and mechanically driven flows in turbulent boundary layer. Waves and instability of geophysical flows. Global-scale circulation. Applications to environmental prediction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate student
MAE	**581**	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**586**	Convection Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**587**	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**589**	Heat and Mass Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3.		Pre-requisites: Graduate Engineering student
MAE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MAE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MAE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Pre-requisites: Graduate Engineering student
MAE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Pre-requisites: Mechanical or Aerospace Doctoral student
MAK	**101**	Elementary Macedonian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**102**	Elementary Macedonian	See MAK 101.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**201**	Intermediate Macedonian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**202**	Intermediate Macedonian	See MAK 201.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
MAK	**311**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**312**	Macedonian Composition and Conversation	Advanced communicative proficiency and writing development. Intended for students enrolled in ASU Study Abroad University of Ss. Kiril and Metodij.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**411**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAK	**412**	Advanced Macedonian Composition and Conversation	Improves self-expression in oral and written skills, emphasizing vocabulary building and use of newspapers and other materials published in Macedonia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-8		
MAS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**501**	Models of Inquiry for Contemporary Issues	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**502**	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MAS	**505**	20th-Century Thought: Concepts of Change, Culture and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theoriesm and paradigms in 20th-century thought.	N	DIS	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**510**	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Students who have credit for IAS 430, may not enroll in MAS 510
MAS	**511**	Technology, Environment and Humanity	Critically analyzes technology in relation to human and environmental issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**512**	History and Philosophy of the Social Sciences	Examines the development, historical context, and long-term importance of major theories of human nature from the 17th century until today.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**513**	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**529**	Latinas and Latinos, Schooling, and Social Inequality	Advanced interdisciplinary understanding of the issues facing Latinas and Latinos in K-16 schooling in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**553**	Latin American Cities	Interdisciplinary study of Latin American world cities (e.g., Mexico City, Santiago) emphasizing integration with U.S. cities, including Los Angeles and Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAS	**585**	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	THE	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1.		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Pre-requisites: Must be in PLAN: ASINTERMA
MAS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-5		Pre-requisites: ALEKS Math Placement Test with a score of 40% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**242**	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher

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MAT	**265**	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**266**	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series. Not open to students with credit in MAT 271.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**267**	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration. Not open to students with credit in MAT 272.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 67% or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4.	MA	Pre-requisites: Must have completed either MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**274**	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences. Credit is allowed for only MAT 274 or 275 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: Must have completed MAT 266 or MAT 271 with a grade of C or greater or be currently enrolled
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or 267 with C or better
MAT	**340**	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**351**	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 270 (or MAT 251 or MAT 265) with C or better
MAT	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MAT	**362**	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 274 (or MAT 275) with C or better
MAT	**370**	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series. Not open to students with a C (2.00) or higher in MAT 371. Credit is allowed for only MAT 370 or 371 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with a C or better
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**372**	Advanced Calculus II	Open, closed, compact sets in Rⁿ continuity, differentiation, partial differentiation, integration in Rⁿ. Inverse/implicit function theorems. Not open to students with credit in MAT 460.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 371 with "C" or better;Co-requisite: MAT 342 (or MAT 343) with "C" or better. Not open to students with credit in MAT 460

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MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**410**	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) with C or better
MAT	**415**	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or MAT 242 or MAT 343) with C or better C or better
MAT	**416**	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or 243) and MAT 342 (or 242, or 343) with C or better
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**420**	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 205 and MAT 274 (or 275), and MAT 342 (or MAT 343) with a C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 272 (or MAT 267) with a C or better
MAT	**423**	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 342 (or MAT 343) with a grade of C or better
MAT	**425**	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) with C or better. MAT 371 recommended.
MAT	**442**	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**444**	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 442 or MAT 443 with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**447**	Cryptography	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: CSE 100 (or CSE 100 or CSE 205); MAT 300 (or MAT 243) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**451**	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better.
MAT	**452**	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended.
MAT	**460**	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems. Not open to students with credit in MAT 372.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better. MAT 371 is recommended. Students with credit for MAT 372, may not enroll in MAT 460
MAT	**461**	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 or MAT 267 with a C or better
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**472**	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line. Appropriate as preparation for MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 300 (or MAT 243) and MAT 342 (or MAT 343) with C or better
MAT	**473**	Intermediate Real Analysis II	Analysis in Rn: implicit function theorem, introduction to manifolds, Lebesque integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 472 with C or better
MAT	**475**	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincar-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or MAT 342 or MAT 343) and MAT 274 (or MAT 275) and MAT 370 (or MAT 371) with a "C" or better
MAT	**476**	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 242 (or 342 or 343) with C or better; MAT 274 (or 275 or 475) with C or better; MAT 370 (or 371) with C or better
MAT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	**485**	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) with C or better
MAT	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
MAT	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	**514**	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**515**	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**516**	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**517**	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**518**	Combinatorial Optimization	Systematic development of combinatorial optimization, including linear programming, duality, primal-dual algorithms, network flow algorithms, weighted matchings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**541**	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**542**	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**543**	Abstract Algebra	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**544**	Abstract Algebra	Continuation of MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**545**	Abstract Algebra	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**547**	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisite: MAT 544
MAT	**548**	Class Field Theory	Theory of the abelian extensions of global and/or local fields. Students should have previously taken a course in algebraic number theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**570**	Real Analysis	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**571**	Real Analysis	Continuation of MAT 570.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**572**	Complex Analysis	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**573**	Complex Analysis	Continuation of MAT 572.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**574**	Theory of Ordinary Differential Equations	Systems, existence proofs, singularities, asymptotic behavior of solutions, boundedness of solutions, eigenvalues and eigenfunctions, and perturbation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MAT	**578**	Functional Analysis	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**579**	Functional Analysis	Continuation of MAT 578.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**117**	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 or MAT 113 with a C or better or completion of the ALEKS Math Placement Test with a score of 40% or higher
MAT	**119**	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, 117, 170, 210 or 270 with C or better or completed the ALEKS Math Placement Test with a score of 50% or higher
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-5		
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher

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MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**243**	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: minimum sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	**270**	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable. Not open to students with credit in MAT 290. The sequence MAT 270 and 271 may be substituted for MAT 290 to satisfy requirements of any curriculum. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 170 with a grade of C or greater or be currently enrolled OR have completed the Calculus Placement Exam with a score of 36 or higher
MAT	**271**	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences, and series. Not open to students with credit in MAT 291. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisites: Must have completed either MAT 265 or MAT 270 with a grade of C or greater or be currently enrolled
MAT	**272**	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis. The sequence MAT 270, 271, 272 may be substituted to satisfy requirements for MAT 290 and 291. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	MA	Pre-requisite: Must have completed MAT 271 with a grade of C or greater or be currently enrolled.
MAT	**275**	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. Credit is allowed for only MAT 275 or 274 toward a mathematics degree. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better
MAT	**300**	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	L	Pre-requisites: MAT 210, or MAT 251, or MAT 265, or MAT 270 with a C or better
MAT	**310**	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT272 with a grade of C or greater or be currently enrolled.
MAT	**342**	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes. Credit is allowed for only MAT 342 or 343 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 267, or MAT 272 with a C or better
MAT	**343**	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 271 or MAT 266 with a C or better
MAT	**350**	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 275 (or MAT 274) with D or better; MAT 343 (or MAt 342) with D or better; Co-requisite: STP 420
MAT	**371**	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**411**	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	**419**	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: CSE 100 (or CSE 110, CSE 205, ACO 101 or ACO 102), MAT 300 (or MAT 243) and MAT 242 (or MAT 342 or MAT 343) with C or better
MAT	**421**	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 272 (or MAT 267) with a C or better
MAT	**429**	Optimization	A variety of optimization models and their applications to management, economics, engineering, and science. Topics include linear programming, integer programming, nonlinear programming, and stochastic programming. Stresses formulation and modeling as well as numerous applications and solving algorithms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 343 and (MAT 350 or MAT 419) with C or better
MAT	**443**	Introduction to Abstract Algebra	Introduces concepts of abstract algebra. Not open to students with credit in MAT 444.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 300 and MAT 342 (or MAT 343) with a C or better
MAT	**445**	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: Must have completed MAT300 and MAT342 with a grade of C or greater or be currently enrolled.

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MAT	**450**	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
MAT	**462**	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisites: MAT 274 (or MAT 275) and MAT 342 (or MAT 242 or MAT 343) with C or better
MAT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-3		
MAT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
MAT	**106**	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ALEKS Math Placement Test
MAT	**142**	College Mathematics	Applies basic college-level mathematics to real-life problems. Appropriate for students whose major does not require MAT 117 or 170.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106, MAT 113 or MAT 117 with C or better or completed the ALEKS Math Placement Test with a score of 30% or higher
MAT	**170**	Precalculus	Intensive preparation for calculus (MAT 260, 270, and 290). Topics include functions (including trigonometric), matrices, polar coordinates, vectors, complex numbers, and mathematical induction.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 106 with B or better or MAT 113 or MAT 117 with C or better or ALEKS Math Placement Test with a score of 50% or higher
MAT	**210**	Brief Calculus	Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290. Fee (online only).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 113, MAT 117, MAT 119 or MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MAT	**211**	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	**251**	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 260, or 270.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	MA	Pre-requisites: MAT 170 with C or better or completed the ALEKS Math Placement Test with a score of 60% or higher
MBB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**245**	Principles of Molecular and Cellular Biology I	Introduces molecular biology, genetic engineering, gene expression/control and evolution, in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	Pre-requisites: CHM 113 with C or better; Pre/Co-requisite: CHM 116 (with C or better if completed)
MBB	**247**	Principles of Molecular and Cellular Biology II	Introduces cell biology, metabolism and regulation, bioenergetics, and protein translocation in the context of cellular and organismal physiology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 245 (or BIO 188) with a C or better
MBB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**343**	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics). Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L	Pre-requisites: MBB 247 or BIO 340 with a C or better; Students who have credit for BIO 343, may not enroll in MBB 343
MBB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB or PLB 350
MBB	**355**	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 with "C" or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**440**	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; Credit is allowed for only BIO or MBB 440
MBB	**444**	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre or Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MIC 445 may not enroll in MBB 445

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MBB	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	**490**	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 247 with C or better; BIO 340 with C or better
MBB	**491**	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	IND	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisites: MBB 343 with C or better; BIO 340 with C or better
MBB	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		
MBB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MBB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Junior or senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 495
MBB	**496**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Junior or senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MBB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**501**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**506**	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications. Note: due to the facilities required for this course, all sessions will take place at the Gross Anatomy Laboratory of the Maricopa County Forensic Science Center.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Credit is allowed for only ASM, BIO or MCB 506
MCB	**540**	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**555**	Advanced Molecular and Cellular Biology I	Study of structural and functional organization of biomolecules and cells, based on current literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**556**	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MCB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**701**	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCE	**548**	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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MCE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCE	**230**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
MCE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**447**	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program
MCE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
MCE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
MCE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MCE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
MCE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
MCE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
MCO	**498**	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	N	OPT	College of Public Programs	Arizona State University	1-7		
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
MCO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**200**	Introduction to Electronic Media	Surveys electronic media in the United States: history, regulation, organization, programming, and effects.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		

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MCO	**240**	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		
MCO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**302**	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Communication student with a cumulative GPA of at least 2.0
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB & H	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**421**	Media Problems	Trends and problems of the mass media, emphasizing editorial decisions in the processing of information.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Minimum 2.25 GPA; Journalism & Mass Comm student OR Graduate Mass Communications student
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	G	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**435**	Social Media	Explores and critically analyzes the social, cultural, legal, ethical, economic, and technological dimensions of social media tools from Facebook to Foursquare, Twitter to Flickr and beyond.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**440**	Applied Media Research	Design, conduct, and analysis of applied media research. Students participate in the Cactus State Poll.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
MCO	**450**	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	HU	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**455**	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity¿s most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**456**	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**460**	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	C	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**465**	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**473**	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.	SB	
MCO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		
MCO	**492**	Honors Directed Study		N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Pre-requisites: Must be an Honors student
MCO	**493**	Honors Thesis		N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	**497**	Honors Colloquium		Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		
MCO	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**501**	Newswriting and Reporting	Designed for graduate students in the MMC program who have undergraduate degrees in nonjournalism areas. Objective is to teach fundamentals of writing and reporting. Fee.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**503**	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**505**	Depth Reporting	Introduces strategies for writing in-depth newspaper or magazine articles.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**510**	Media Research Methods	Professional approach to online and library research, getting and using public records, and investigative journalism techniques.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**520**	Mass Communication Theories and Process	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to various professional communication needs.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**522**	Mass Media and Society	Mass media as social institutions, particularly interaction with government and public. Emphasizes criticism and normative statements.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**525**	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**530**	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**531**	Advanced Broadcast Reporting	News and information practices of networks, stations, and industry. Practice in writing, reporting, and editing with emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**532**	Foundations in Mass Communication Research	Designed for students who have not had a course in academic research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Masters of Mass Communcation and Journalism and Mass Communication PhD students
MCO	**560**	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Masters of Mass Communication student
MCO	**570**	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	Y	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Pre-requisite: Masters of Mass Communication student
MCO	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MCO	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	**710**	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism Mass Communication PHD students
MCO	**711**	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student
MCO	**712**	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisite: Journalism Mass Communication PhD student
MCO	**720**	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**722**	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3.		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**755**	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1.		Pre-requisite: Journalism and Mass Communication PhD student
MCO	**765**	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	DIS	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student
MCO	**120**	Media and Society	Role of newspapers, magazines, radio, television, and motion pictures in American society. Credit is allowed for only MCO 120 or 110. Designed for nonmajors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
MCO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MCO	**418**	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & H	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MCO	**430**	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	Pre-requisites: Journalism & Mass Communication student with a cumulative GPA of at least 2.5 OR a non-Journalism & Mass Comm student with a cumulative GPA of at least 2.0 OR Graduate Mass Communications student
MDL	**410**	Laboratory Leadership	Clinical lab leadership and management. Applies the principles of personnel management and supervision, allocation of resources, and staff communication.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Prerequisite: Admission to Medical Laboratory Science program
MDL	**420**	Advanced Clinical Urinalysis and Body Fluids	Theory and applications of principles in urinalysis with emphasis on the etiology, pathophysiology, and clinical manifestations of renal and other metabolic defects as reflected by the analysis of urine and other body fluids.	N	LEL	N	GNA	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	**430**	Advanced Hematology and Hemostasis	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids. Etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	**440**	Advanced Immunohematology and Immunology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 182; MIC 205; Admission to Medical Laboratory Science program
MET	**150**	Introduction to Engineering Technology	Introduces mechanical, manufacturing, and aeronautical engineering technology. Covers aspects of the industries utilizing these majors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		
MET	**160**	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		

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MET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**211**	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	**230**	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2.		
MET	**231**	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 160 and MET 230
MET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**300**	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 230 and MET 231 OR MSE 250 OR Manufacturing Technology & Management concentration BAS student
MET	**302**	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: College of Technology and Innovation or Fulton Engineering students
MET	**309**	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**313**	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	**314**	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: MET 313 or MAE 213 or MSE 211 or CON 223 or CEE 213 OR be co-enrolled in MET 313
MET	**321**	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites:AET 312; MET 313; MET 340
MET	**331**	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 313 (or CON 223 or MAE 213)
MET	**340**	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: PHY 112 or PHY 131; MAT 266 or MAT 271
MET	**341**	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**344**	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; MET 300 (or MSE 250) or College of Technology and Innovation BAS student in Manufacturing Technology & Management concentration and MET 300
MET	**345**	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231 or Manufacturing Tech & Mgt concentration BAS student
MET	**351**	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: EST 210
MET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
MET	**396**	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisite: Junior or Senior standing
MET	**400**	Materials and Joining Processes	Effects of joining processes on metals and composites. Thermal cycle effects on solid-state and liquid-solid material transformations.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**401**	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: STP 420 (or APM 301); Credit is allowed for only MET 401 or 501
MET	**402**	Advanced Material Joining	In-depth analysis of common materials-joining processes and their process parameters. Includes automation, soldering, and adhesive bonding. Lecture, lab.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
MET	**409**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509

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MET	**410**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 410 or 510.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341 . Students with credit for MET 510, may not enroll in MET 410
MET	**415**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 341; students who have credit for MET 515, may not enroll in MET 415
MET	**416**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516
MET	**418**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 418 or 518.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300 or MSE 250. Students who have credit for MET 518, may not enroll in MET 418
MET	**421**	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 313, MET 340
MET	**423**	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: AET 312, MET 331
MET	**424**	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: EST 210; MET 321; MET 421
MET	**426**	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	**427**	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requistes: MET 423; MET 424
MET	**432**	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340 or MAE 240; Credit is allowed for only EGR or MET 432
MET	**433**	Thermal Power Systems	Analyzes gas power, vapor power, and refrigeration cycles. Components of air conditioning systems. Direct energy conversion. Psychrometry. Analyzes internal combustion engines and fluid machines.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	4.		Pre-requisites: MET 432 OR College of Technology and Innovation MS student
MET	**434**	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340
MET	**435**	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 340
MET	**436**	Turbomachinery Design	Applies thermodynamics and fluid mechanics to the analysis of machinery design and power cycle performance predictions.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 432 OR Technology and Innovation or Fulton Engineering graduate student
MET	**437**	Design for Materials Joining	Uses design principles to analyze structures and determine appropriate weld/braze/solder or adhesive joint size. Uses welding codes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 300
MET	**438**	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 OR Technology and Innovation or Fulton Engineering graduate student
MET	**440**	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331
MET	**442**	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 231; Credit is allowed for only MET 442 or 502
MET	**443**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	**444**	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 309; Credit is allowed for only MET 444 or 504
MET	**455**	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 351
MET	**460**	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 331 and senior status
MET	**461**	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: MET 460
MET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
MET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
MET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Minimum Junior status; College of Technology and Innovation or Fulton Engineering student

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MET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Pre-requisites: Minimum Junior standing; Manufacturing Engineering Tech student OR Technology and Innovation or Fulton Engineering graduate student
MET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
MET	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**501**	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	**502**	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	**504**	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	**507**	Manufacturing Enterprise	Organization and project management of cellular manufacturing methods, including IIT and lean manufacturing.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: College of Technology and Innovation or Fulton Engineering students with senior academic level or greater
MET	**509**	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 409 or 509
MET	**510**	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory. Credit is allowed for only MET 510 or 410.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for MET 410, may not enroll in MET 510
MET	**513**	Advanced Automation	Analysis and design of hard and flexible automation systems. Particular attention to material-handling technology.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Minimum Senior Standing; College of Technology and Innovation or Fulton Engineering
MET	**514**	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	**515**	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	**516**	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	**518**	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining. Credit is allowed for only MET 518 or 418.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students who have credit for MET 418, may not enroll in MET 518
MET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		
MET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-3		
MGT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	**300**	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, or Business Minor student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better.
MGT	**301**	Principles of Management	Introduces the theoretical and practical foundations of organizations with a focus on individuals, groups, and organizational systems.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: School of Global Management and Leadership student.
MGT	**302**	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and 56 earned hours; Must have completed ECN 212 or 214 with a grade of C or better; credit for AGB 302 or MGT 302
MGT	**303**	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W. P. Carey School of Business Honors student; PGS 101 or PGS 304 or SOC 101 or SOC 301, and ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 with C or better
MGT	**310**	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	**320**	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; ECN 221 or ECN 231, and ACC 241 or ACC 242 or ACC 271 completed with C or better; Pre- or co-requisite MGT 300.
MGT	**350**	Seminar in International Business	Broad exposure to global business; cross-cultural differences across business disciplines; European Union history and future; impact of exchange rates.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; SCM 300 with C or better, OR Non-business student with min 2.0 ASU cum GPA and 56 earned hrs and MGT 380 with C or better
MGT	**380**	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non degree or Grad student.
MGT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre/Co-requisite: ACC 240 or ACC 241 or ACC 242 or ACC 271 with C or better
MGT	**400**	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	**410**	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey Management BS student; Pre-requisites MGT 300, and MGT 320 or MGT 303, and ENG 302 with grade of C or better.
MGT	**411**	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	**412**	Managing Human Resources	Overview of domestic and global human resources management topics pertinent to managers and first-line supervisors, as well as those with interest in human resources management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Global Business/Ldrshp Mngt or Global Business/Human Resource student with conditional or professional status, must not have earned credit for HRM 410, AND completed MGT 301 with a grade of C or greater.
MGT	**420**	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	**440**	Entrepreneurship	Provides students with a framework and a skill set for identifying, evaluating, valuing, and developing entrepreneurial opportunities. Challenges students to develop and refine their individual entrepreneurial perspective. Case-based and interactive instruction.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 300 or MGT 310 or MGT 303, and FIN 300 or FIN 302 or FIN 303 completed with a grade of C or better.

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	**445**	Business Plan Development	Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	**450**	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey BS or BA student. Pre-requisites ENG 302 or 301, FIN 300 or FIN 302 or FIN 303, MKT 300 or MKT 302 or MKT 303, and MGT 300 or MGT 303 with C or better.
MGT	**459**	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	**460**	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.	L	Pre-requisites: W.P. Carey Management BS student; Pre-requisite MGT 410, and FIN 300 or FIN 302 or FIN 303, and MKT 300 or MKT 302 or MKT 303 with C or better.
MGT	**464**	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process.
MGT	**465**	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5.	L	Pre-requisites: Department approval; application process
MGT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey Management BS student.
MGT	**492**	Honors Directed Study		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: Must be an Honors student
MGT	**493**	Honors Thesis		N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Pre-requisites: Must be an Honors student
MGT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-6		
MGT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	**502**	Organization Theory and Behavior	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: Specific W.P. Carey students
MGT	**503**	Human Resources Management: Principles and Skills	Emphasizes strategies for managing human resources and implementing HRM programs and policies that make people more productive and satisfied.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**504**	Ethics and Corporate Social Responsibility	Reviews practical and conceptual tools to deal with the ethical implications of a variety of types of managerial decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**505**	Leadership and the Knowledge Economy	Examines organizational processes that seek synergies between the information processing capacity of IT and the creative capacity of humans.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisite: Applied Leadership & Management graduate student
MGT	**512**	Professional Relationship Management	Explores theories, methods, skills, and practices central to development of professional-level expertise in the management of relationships in the workplace.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan.
MGT	**513**	Leadership Skills and Principles	In-depth study of traditional and emerging ways to demonstrate leadership effectively with emphasis on leadership development and coaching activities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in either the Accountancy & Applied Leadership graduate plan or the Applied Leadership & Management graduate plan
MGT	**514**	Entrepreneurial Leaders	Applies leadership concepts to entrepreneurial processes. Considers independent entrepreneurs, as well as intrapreneurs within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Applied Leadership & Management graduate plan; MGT 513 with C or better
MGT	**515**	The Neuroscience of Leadership	Provides a rigorous understanding of how the human brain supports leaders in thought, perception, decision-making, affect, action, and social processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Mgt & Leadership graduate student in Acct & Applied Leadership or Applied Leadership & Mgt. Applied Leadership & Mgt students must have completed MGT 502, 503, 504, and 505 with C or better
MGT	**523**	Performance Management	Addresses effective management of people in organizations. Considers evaluating and improving performance using concepts and application.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student

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MGT	**559**	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-3		Pre-requisites: Must be a W.P. Carey degree seeking Graduate student
MGT	**561**	Advanced Integrated Project	Capstone project of the high-technology ASU MBA. Student teams develop business plans for new technology-based products.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Management	1-6		Pre-requisites: MBA degree student
MGT	**570**	Management Consulting	Develops understanding of how internal and external consultants add value.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**588**	Strategic Leadership	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**589**	Strategic Management	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate W.P. Carey students or Public Administration MPA student
MGT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: MBA degree student
MGT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**596**	Global Strategic Management Project	Experientially examines the interaction among the strategic forces within an organization with the competitive forces in the global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3.		Pre-requisites: School of Global Management and Leadership graduate student in Applied Leadership & Management; MGT 502, 503, 504, and 505 with C or better
MGT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student

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MGT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MGT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**500**	Research Methods	Course on research methods in a specific discipline.	Y	THE	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**538**	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**540**	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Admission to the Masters of Healthcare Innovation
MHI	**542**	Systems Thinking in a Complex Environment	Studies basic and advanced systems principles as they relate to the American healthcare system. Specific emphasis is given to system assessment, designing system interventions, and managing system dysfunction from the innovator's perspective.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**544**	Innovations in Information Systems	Allows students to develop their own learning goals around the innovative use of technology to: critically appraise and evaluate the use of technology to access information; develop skills in maximizing the use of technology to advance practice, thinking, and decision making; advance the integration of human potential and available technology; and develop strategies to address the competing priorities of technology, confidentiality, safety, high reliability principles, full disclosure to the public, and risk management. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**546**	Communication, Technology, and Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Master of Healthcare Innovation major
MHI	**548**	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**550**	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**552**	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**554**	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**561**	Capstone Innovation Project I	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Admission to Master of Healthcare Innovation degree
MHI	**562**	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**563**	Capstone Innovation Project III	Finalizes the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHI	**679**	Biostatistics: Principles of Statistical Inference.	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student
MHI	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**140**	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	Pre-requisites:Must be a Music student; must be a freshman
MHL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**201**	Mac Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	CS	
MHL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**341**	Music History	Western music from the Greeks to the present day. Need not be taken in sequence with MHL 342.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 140 with a C or better or currently enrolled; MTC 221 with a C or better or currently enrolled
MHL	**342**	Music History	See MHL 341.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	Pre-requisites:Must be a Music student; must have completed MTC221 with a C or better
MHL	**344**	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & G	
MHL	**352**	The Evolution of Jazz	Origin, development, and styles of jazz music and its exponents.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MTC 223 with C or better
MHL	**363**	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	Pre-requisites: Music student; MHL 342 with C or better
MHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	**438**	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	**439**	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	**440**	Music Since 1900	Examines stylistic trends, major composers and their works, and cultural contexts in music since 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L or HU	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with a C or greater
MHL	**456**	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**466**	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	(L or HU) & C	
MHL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	**492**	Honors Directed Study		N	THE	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**493**	Honors Thesis		N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MHL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MHL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MHL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**532**	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate Music student
MHL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MHL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**647**	Topics in American Music	Selected topics in the history of music. Composers working in the Americas with emphasis upon music since 1900.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**657**	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**664**	History of Music Instruments	Surveys the history and development of music instruments in traditional, folk, and art cultures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**668**	Introduction to Ethnomusicology	Introduces the theory and methodology of the discipline, including bibliography, fieldwork, transcription, analysis, and organology.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**670**	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**675**	History of Choral Music	Major choral works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MHL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MHL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SG	
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SG	
MIC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better
MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SG	Pre/Co-requisite: MIC 205 or MIC 220 (with a C or better if completed)
MIC	**220**	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: CHM 116; BIO 181 (BIO 188) or MBB 245
MIC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**298**	Honors Directed Study		N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**302**	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**314**	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**360**	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**379**	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**381**	Pathogenic Microbes	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 220 and MIC 360 with a C or better
MIC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**401**	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	L	Pre-requisite: MIC 302 with C or better
MIC	**402**	Service Learning	K-12 tutoring internship; learning activities employed were originally developed as part of the Bio Reach Program. Requires weekly reflective writing. Fee.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4		Pre-requistes: MIC 220, BIO 353, or BIO 360 with a grade of C or better

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MIC	**421**	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre-requisites: MIC 302 with a grade of C or better
MIC	**425**	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: MIC 420 with C or better
MIC	**426**	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245) and BIO 353 with C or better
MIC	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for PSY 427, may not enroll in MIC 427
MIC	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 420, PHI 317, HPS 314, or PHI 314 with a C or better. Students who have credit for PHI 428, may not enroll in MIC 428
MIC	**441**	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisite: BIO 340 with C or better; MIC 220 with C or better
MIC	**442**	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.		Pre/Co-requisite: MIC 441
MIC	**445**	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 340 with C or better; MIC 302 or MBB 245 with C or better; Students with credit for MBB 445 may not enroll in MIC 445
MIC	**446**	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	**461**	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**470**	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MIC 302 with C or better
MIC	**475**	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
MIC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	**485**	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors student
MIC	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 495
MIC	**496**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MIC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		
MIC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**527**	Neuroimmunology	Studies the mind's influence on immunity and the immune system's influence on the mind, neuroimmunologic diseases, and the neuroimmunological circuitry involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**585**	Molecular Virology	Selected topics concerning molecular aspects of eukaryotic virus replication and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MIC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MIC	**380**	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: MIC 220 with C or better
MIC	**420**	Immunology: Molecular and Cellular Foundations	Molecular and cellular foundations of immunology. Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3-4		
MIC	**443**	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance. Not open to students with credit in MIC 205.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: BIO 353 or LSC 353 with C or better; LSC 445 or MIC 444 with C or better or co-enrolled in MIC 444
MIC	**444**	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	**205**	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SG	Pre-requisites: CHM 101 or CHM 113 with a D or better

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MIC	**206**	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit. Fee.	N	LAB	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1.	SG	Pre/Co-requisite: MIC 205 or MIC 220 (with a C or better if completed)
MIC	**314**	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
MIC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
MIS	**101**	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**102**	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**201**	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**202**	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**205**	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**301**	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**302**	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	L	
MIS	**303**	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4.		
MIS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**401**	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**402**	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.		
MIS	**410**	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**412**	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3.	SB & G & H	
MIS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Pre-requisites: Must be an Honors student
MIS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		

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MKT	**300**	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA; ECN 211 or ECN 212 with a grade of C or better.
MKT	**301**	Fundamentals of Marketing	Examines the role and process of marketing within the society, economy, and business organization.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisite(s): School of Global Management and Leadership student with Professional OR Conditional status
MKT	**302**	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W.P. Carey Marketing BS student; ACC 241 and ECN 221 with C or better
MKT	**303**	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey School of Business Honors student; ACC 241, 242 or 271 with C or better; ECN 221 or ECN 231 with C or better; Credit is allowed for only MKT 300, 302 or 303
MKT	**352**	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.	L	Pre-requisite: W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	**360**	Seminar in International Business	Broad exposure to global business and cross-cultural differences. Emphasizes the European Union history and future and the impact of financial issues on marketing practices. Lecture, discussion, group work.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W. P. Carey BS or BA student OR Non-business student with min 2.5 ASU cum GPA and min 56 earned hours; SCM 300 with C or better
MKT	**365**	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with a minimum 2.5 ASU cum GPA, 2.5 and 56 earned hours; MKT 300 or MKT 302 or MKT 303 with C or better
MKT	**370**	Professional Sales and Relationship Management	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		
MKT	**390**	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MKT	**391**	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**393**	Essentials of Applied International Marketing	Travel to companies outside the United States to benchmark and assess cross-cultural marketing practices. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree seeking student OR be a Graduate student
MKT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisite: Non marketing student; Minimum cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	**395**	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: Non-Marketing student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	**402**	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3-4		Pre-requisite: W.P. Carey BS or BA student or non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 352 with C or better
MKT	**410**	Sales and Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student with minimum 2.5 ASU cumulative GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**413**	Marketing Research Concepts and Practice	Research techniques for collecting, analyzing, and interpreting marketing information. Includes design and completion of a client-sponsored, industry-based research project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		
MKT	**414**	Global Strategic Marketing	Examines marketing and marketing communication strategy development, and evaluation in the context of global markets and organizational objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	4.		Pre-requisite: Global Mgt Marketing or Int'l Studies student with conditional or professional status; MKT 300, MKT 301 or GLB 301 with C or better
MKT	**415**	Promotion Management	Market positioning and integration of promotional activities and marketing communications of the firm, including advertising, personal selling, public relations, and sales promotion.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cumulative GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**420**	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisite: W.P. Carey BS or BA student OR Non-business student; Minimum 2.5 ASU cum GPA; Minimum 56 hours; MKT 302 or MKT 303 with C or better
MKT	**425**	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with a minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 with C or better
MKT	**430**	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA; MKT 302 or MKT 303 with grade of C or better
MKT	**435**	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Prerequisites: W. P. Carey BS or BA student, OR non-business student with minimum 2.5 ASU cum GPA and minimum 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**442**	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**452**	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	**462**	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: W.P. Carey BS or BA student, or non-business student with min 2.5 ASU cum GPA and min 2.5 ASU business GPA and 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402.
MKT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey Marketing BS student; MKT 302 or MKT 303 with B or better
MKT	**492**	Honors Directed Study		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**493**	Honors Thesis		N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Pre-requisites: Must be an Honors student
MKT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 302 or MKT 303 with C or better
MKT	**497**	Honors Colloquium		Y	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		
MKT	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	**502**	Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
MKT	**510**	Understanding Buyer Behavior	Examines behavioral science concepts and theories from the perspective of a marketing researcher who needs knowledge of customer behavior to aid marketing managers as they develop, evaluate, and implement effective marketing strategies for new and existing products.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**513**	Marketing Research for Product Development I	Covers qualitative and interpretive methodologies designed to understand and capture the voice of customers with the aim of infusing research results into the new product development process. Covers methods such as ethnographic and observational research, visual documentation, focus groups, in-depth interviews, and artifact analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**514**	Marketing Research for Product Development II	Provides theoretical and practical knowledge regarding the market assessment and survey research methods that underlie product development in organizations. Focuses on research techniques particularly applicable to the opportunity identification and concept/project evaluation stages of the new product development process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better or currently enrolled
MKT	**515**	Marketing Research for Product Development III	Emphasizes theory and tools useful for refining product development decisions involving narrow product development issues. Covers research techniques that are well suited for fine-tuning new product/service decisions associated with imminent market launch. Covers experimental designs, customer choice modeling, and lab and field test marketing along with appropriate data collection, measurement, and data analysis techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled
MKT	**530**	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student¿s individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization¿s structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	**550**	Innovative Brand Management and Marketing Communication	Focuses on innovative approaches to brand development and management throughout the product life cycle. Emphasizes marketing communications in a fundamental aspect of this process. The demand for innovative practices is especially evident in many aspects, including new media, social media, technology, open sourcing, and customer co-creation of brands. Addresses the role of customer understanding to market success. Brand management and marketing communication are dominant innovation decision areas within marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**560**	Customer Relationship Management	Covers approaches for customer relationship management (CRM) including assessing customer value, prospect/customer identification and targeting, assessment and development of customer life-time value, and customer attrition and retention. Covers CRM issues, techniques, and terminology associated with database marketing and data mining for analytical opportunity identification. Students must complete a project using CRM software in order to demonstrate their command of CRM issues, both conceptually and practically.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3.		Pre-requisites:ECN 525 with a grade of D or better, or currently enrolled
MKT	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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MKT	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MKT	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MLS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
MLS	**501**	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**502**	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**503**	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student
MLS	**504**	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	DIS	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3.		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MPH	**510**	Health Policy and Management	Provides (1) an overview of the U.S. healthcare delivery system and the policies that have shaped it and (2) a foundation in organizational theory and design concepts to support improved system performance. Identifies the dynamics of an organization in terms of its power and political structures, applies creative problem-solving methods, and effectively implements change. Emphasizes the interpersonal and leadership skills required to be effective advocates for public health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Graduate student

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MPH	**520**	Principles of Epidemiology	Presents concepts and methods of the science of epidemiology. Introduces concepts important for design and interpretation of epidemiological studies. Critical selection, calculation and interpretation measures of disease frequency and effect appropriate for different study designs. Also introduces important concepts, including confounding, interaction, modeling, and methodological bias. Includes hands-on exercises in evaluation of epidemiologic data and critical review of studies in the current medical and scientific literature germane to urban and mental health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: MPH 579; MPH 551
MPH	**530**	Social and Behavioral Determinants of Health	Analyzes the major social variables that influence population health (e.g., poverty, social class, gender, race, family, community, work, behavioral risks, and coping resources) as well as the major theories of health behavior. Provides the knowledge and skills needed to diagnose/understand community, individual, and organizational health behaviors and change processes, especially in cross-cultural settings. Provides a theoretical foundation for planning culturally appropriate public health interventions/programs in the context of the social and ecological models of health behavior.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: Master of Public Health
MPH	**551**	Biostatistics II	Covers more advanced statistical concepts, including multiple linear regression, elementary nonparametric techniques, simple contingency table analyses, binary dependent variable models, and survival analysis. Places more emphasis on students' ability to synthesize information and draw conclusions from results. Requires a basic knowledge of SAS programming.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisite: MPH 550 with B- or better
MPH	**579**	Biostatistics I	Common descriptive and inferential techniques employed in public health, including graphical and numerical descriptive statistics; elementary probability calculation; point and confidence interval estimation and hypothesis testing for population means, proportions, differences between means and differences between proportions; association and linear regression. Emphasizes interpretation and concepts. Introduces the statistical software, SAS, as a programming tool to accomplish many of these tasks.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Admission to MPH degree program
MPH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MSE	**100**	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	2.		Pre-requisites: Undergraduate Engineering or University College student
MSE	**111**	Challenges in Materials Engineering	Introduces current issues and concepts of materials engineering, relationship between materials properties, application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-3		
MSE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**208**	Patterns in Nature	Online hybrid physics course examining topics from optics to analytical techniques. Mandatory two (2) on-campus lab meetings. Fee.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	
MSE	**211**	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	**215**	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	**250**	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: CHM 114 or CHM 113; Pre/Co-requisite: CHM 116
MSE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**308**	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Program	4.	SQ	Pre-requisite: MSE 208
MSE	**315**	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	CS	Pre-requisites: Engineering BS/BSE students, or Materials minor, OR Non-Engineering students with a minimum GPA of 3.00; MAT 275 (or MAT 274) with C or better; MSE 250 with C or better
MSE	**330**	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student OR Non-Engineering student with minimum GPA of 3.00 or Materials minor student; MSE 250 or ECE 350

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MSE	**335**	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE students or students with approved Materials minor; MSE 330
MSE	**355**	Materials Structure and Microstructure	Elements of the structure of metals and alloys, measurement of mechanical properties, and optical metallography. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or students with approved Materials minor; MSE 250 with a C or better,OR Graduate Engineering student
MSE	**356**	Materials Structure and Microstructure Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 355
MSE	**358**	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: MSE 315 completed with D or better; Engineering BS/BSE students or Materials minor
MSE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		
MSE	**420**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE student or Materials minor; MSE 355 or Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	**421**	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent. fee	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre/Co-requisite: MSE 420
MSE	**440**	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 440 or 516.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or Materials minor; MSE 355 completed with a D or better in MSE 355
MSE	**441**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE student or Materials minor; MSE 250 with C or better (or ECE 350); Credit is allowed for only MSE 441 or 512
MSE	**450**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. fee	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE student or Materials minor; PHY 131; MSE 355: Credit is allowed for only MSE 450 or 510
MSE	**451**	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES. Fee.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Program	1.		Pre-requisite: Engineering BS/BSE student or Materials minor; Co-requisite: MSE 450
MSE	**470**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE student or Materials minor ; MSE 250 with C or better; CEE 213, MAE 213 or MSE 211 with C or better; MAT 343, MAT 242 or MAT 342 with C or better. Credit is allowed for only MAE 455 or 470
MSE	**471**	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE student or Materials minor; MSE 355
MSE	**475**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Engineering BS/BSE students or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 475 MSE 518, EEE 518, MAE 518 or CHE 518
MSE	**476**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 476 or 519.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Engineering BS/BSE student or Materials minor student; MSE 250 with C or better. May not enroll in MSE 476, if received credit for MSE 519
MSE	**482**	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisite: Engineering BS/BSE student or Materials minor; MSE 420; Pre/Co-requisites: MSE 470 and MSE 471 or Graduate Engineering students
MSE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**490**	Capstone Design Project	For small groups in fundamental or applied aspects of engineering materials; emphasizes experimental problems and design. Fee.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.	L	Pre-requisite: Engineering BS/BSE student; MSE 482
MSE	**492**	Honors Directed Study		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6		Pre-requisites: Honors students only
MSE	**493**	Honors Thesis		N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Program	1-6	L	Pre-requisites: Honors students only
MSE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Engineering BS/BSE student
MSE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-7		Pre-requisite: Engineering BS/BSE or Engineering Graduate student
MSE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Program	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**510**	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	**512**	Analysis of Material Failures	Identifies types of failures. Analytical techniques. Fractography, SEM, nondestructive inspection, and metallography. Mechanical and electronic components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only MSE 441 or 512
MSE	**513**	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**514**	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	**516**	Mechanical Properties of Solids	Effects of environmental and microstructional variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction. Credit is allowed for only MSE 516 or 440.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**517**	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**518**	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requsiite: Fulton Engineering Graduate students; Credit is allowed for only CHE 518, EEE 518, MAE 518, MSE 475 or 518
MSE	**519**	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior. Credit is allowed for only MSE 519 or 476.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**523**	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**524**	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only CHM 541 or MSE 524
MSE	**525**	Physics of Materials	Teaches fundamental concepts of applied physics as related to the solid state. Wave-particle duality and the Schrodinger equation; chemical cohesion, bonds and energy bands in metals and insulators; optical, electronic, and magnetic properties. Requires a basic knowledge of differential equations; linear algebra; and electrical, magnetic, and optical properties of materials. A course in modern physics is highly recommended, but not required.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**526**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 511 or 481.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**527**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisites: Students who have credit for PHY 482, PHY 512, or NAN 512, may not enroll in MSE 527
MSE	**540**	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only NAN, MSE or PHY 546
MSE	**550**	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		Credit is allowed for only MSE, NAN, PHY or SEM 552
MSE	**553**	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	1-3		Prerequisite(s): degree- or nondegree-seeking graduate. Corequisite(s): MSE 552 (or PHY 552). Credit is allowed for only MSE 553 or PHY 553

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MSE	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**555**	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**561**	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**565**	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**570**	Polymer Structure and Properties	Relationships between structure and properties of synthetic polymers, including glass transition, molecular relaxations, crystalline state viscoelasticity, morphological characterization, and processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Program	3.		
MSE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-12		

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MSE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Program	1-12		
MSE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Program	1.		
MSE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	**601**	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**602**	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Doctoral Music students
MSI	**755**	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Doctoral Music students
MTC	**123**	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Must be a music student in the music composition (FAMUSTCBM) plan
MTC	**125**	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sightsinging and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**221**	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 125 with C or better
MTC	**222**	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 221 with C or better
MTC	**223**	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**315**	Modern Arranging	Techniques in arranging for the contemporary jazz, radio, television, and studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; MTC 223 with C or better
MTC	**316**	Modern Arranging	Continuation of MTC 315.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	**320**	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites:Must be a Music student; must have completed MTC221 with a C or greater or be currently enrolled
MTC	**321**	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 221 with C or better
MTC	**323**	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Bachelor of Music student
MTC	**327**	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 222 with C or better
MTC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

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MTC	**422**	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; Passed audition
MTC	**425**	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**428**	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**429**	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 321 with C or better
MTC	**430**	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MTC 223 with C or better
MTC	**433**	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music student
MTC	**436**	Electronic Studio Techniques I	Principles of analog electronic music systems and their application in the composition of electronic music. Assumes a thorough knowledge of music notation and intervals.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**437**	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**440**	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MTC	**441**	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requsites:Must be a Music student; must have completed MTC 321 AND MUP 236 with a C or greater or be currently enrolled
MTC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MTC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	**495**	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0.		
MTC	**496**	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MTC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MTC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MTC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**516**	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**517**	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**518**	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**519**	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**520**	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**523**	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	**525**	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**527**	History of Music Theory	Theory from Pythagoras to the 16th century. Need not be taken in sequence with MTC 528.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**528**	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MTC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**723**	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Graduate Music student
MTC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MTE 180 with C or better
MTE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	C	Pre or Co-requisites: A college level math course
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better; Teacher Education milestone
MTE	**483**	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: MAT 310 with C or better
MTE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		
MTE	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MTE	**585**	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
MTE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
MTE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MTE	**180**	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	**181**	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: MTE 180 with C or better
MTE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MTE	**482**	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
MTE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
MU	**502**	Hist Musical Style		N	LEC	N	CNV	Herberger College of the Arts	School of Music	2.		
MUD	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUD	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUD	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
MUD	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
MUD	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
MUE	**110**	Introduction to Music Education	Overview of music education. Orientation to student characteristics, teacher roles, and foundations of philosophy and history. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student
MUE	**161**	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**211**	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**261**	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional`ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student; MUE161 with C or better
MUE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**310**	Music in Early Childhood Education	Identifying and understanding musical needs of young children. Methods and materials for program development for classroom teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**311**	Music for Classroom Teacher	Development of the classroom music program in the elementary school. No previous music experience or course work required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**313**	Elementary Music Methods	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisite: Music student
MUE	**315**	General Music in Secondary Schools	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisite: Music student
MUE	**317**	Educational Methods for Violin and Viola	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**318**	Educational Methods for Cello and String Bass	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**327**	Educational Methods for Trumpet and Horn	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**328**	Educational Methods for Trombone, Euphonium, and Tuba	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	**335**	Educational Methods for Guitar	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**336**	Educational Methods for Percussion	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Education student
MUE	**337**	Educational Methods for Flute, Clarinet, and Saxophone	Teaching and playing skills for music teachers. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**338**	Educational Methods for Double Reed Instruments	Teaching and playing skills for music teachers. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**381**	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	L	Pre-requisite: Music Therapy student
MUE	**384**	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**385**	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**386**	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**387**	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**388**	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Music Therapy student
MUE	**436**	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy student
MUE	**441**	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**463**	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	**467**	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	**475**	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music Therapy student; MUE 463 (MUE 362) with C or better
MUE	**476**	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	**480**	Choral Methods	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**481**	Instrumental Practicum/Methods	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**482**	Instrumental Practicum/Methods	See MUE 481.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**485**	String Practicum/Methods	For students preparing to administer a string program and teach strings at the elementary level.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4.		
MUE	**489**	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	**501**	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups. Prerequisite: graduate student in Music Therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Must be a graduate student in Music Therapy
MUE	**548**	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		

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MUE	**549**	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**550**	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**551**	Advanced Studies in Elementary School Music	For experienced teachers; organization and content of K-6 general music classes. Emphasizes teaching music reading and ear training to young children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**552**	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**560**	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**562**	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**564**	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**566**	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**567**	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Must be a graduate Music Therapy student
MUE	**568**	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**569**	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	**570**	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**571**	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUE	**572**	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**573**	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Music Therapy MM student
MUE	**574**	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**575**	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music Therapy MM student
MUE	**579**	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**585**	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**586**	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**754**	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**755**	Historical Research in Music Education	Knowledge and insights related to conducting historical research in music education. Includes development of a mini-proposal for a dissertation on the history of music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUE	**756**	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**757**	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		Pre-requisites: Doctoral Student in Music Education
MUE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	N	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		

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MUP	**100**	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0.		
MUP	**111**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**117**	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**121**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**127**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4.		Pre-requisites: Music students who have passed audition
MUP	**131**	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**132**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Prerequisites: Must be a Music Therapy student; must have completed MUP131 with a C or greater or be currently enrolled
MUP	**133**	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**134**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**141**	Jazz Fundamentals	Principles, methods, and theory of jazz performance and pedagogy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**209**	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**210**	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**217**	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 117 with C or better
MUP	**231**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP132 with C or better
MUP	**232**	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP231 with C or better
MUP	**233**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**234**	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**235**	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student
MUP	**236**	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**237**	Fretboard Harmony	Scales, chords, harmony, basic improvisation for the guitar. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**250**	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music students who have passed audition
MUP	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**301**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music student; MUP 232 with C or better

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MUP	**302**	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music student; MUP301 with C or better
MUP	**311**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**317**	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**319**	Recording Studio Techniques	Study of both analog and digital recording methods. Includes lab time on recording console and tape machines.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**321**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**327**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Music students who have passed audition
MUP	**337**	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**339**	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**340**	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: MUP 210 with C or better
MUP	**344**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**345**	Symphony Orchestra	Over a 4-year period, the student is introduced to the masterpieces of symphony orchestra literature. 3 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**350**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**352**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**353**	Symphonic Chorale	4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**357**	Women's Chorus	2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**361**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets daily.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**362**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 2 hours per week in fall, 4 hours in spring. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**363**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 2 hours per week. Performing ensemble. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**370**	Music Theatre: Techniques	Exercises and improvisations for the singer/actor emphasizing body awareness, basic music theater performance skills, and freedom of the vocal and breath mechanisms. Section 1 (Movement for Singers); Section 2 (Expression); Section 3 (Interpretation); Section 4 (Advanced Expression); Section 5 (Advanced Interpretation). Sections 2 through 5 must be taken in sequence. Each section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**371**	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**372**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**373**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition

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MUP	**374**	Music Theatre: Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**379**	Chamber Music Ensembles	Brass, guitar, keyboard, mixed, percussion, string, vocal, and woodwind ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**385**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**386**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**387**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**388**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**436**	Sinfonietta	Enhances musical understanding and performance skills of a variety of the symphonic literature. 2 times per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisite: Music students who have passed audition
MUP	**440**	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**451**	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**453**	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**454**	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**455**	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**476**	New Music Ensemble	In-depth study, synthesis, and performance of classical works written within the last twenty years for small ensemble and for instruments with electronics. Involves discussion and realization of advanced interpretive and technical concepts related to contemporary music.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**481**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**482**	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2.		Pre-requisites: Music students who have passed audition
MUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Music students who have passed audition
MUP	**487**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		Pre-requisites: Music students who have passed audition
MUP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Music students who have passed audition
MUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**495**	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**496**	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0.		Pre-requisites: Music students who have passed audition
MUP	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Music students who have passed audition
MUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		Pre-requisites: Music students who have passed audition
MUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisites: Music students who have passed audition
MUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	**507**	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**508**	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**509**	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**510**	Jazz Keyboard Harmony	Continuation of MUP 509.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**511**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit. Fee.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2.		
MUP	**517**	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**518**	Advanced Improvisation	Continuation of MUP 517.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**521**	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**527**	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
MUP	**540**	Advanced Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**541**	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUP	**544**	Chamber Orchestra	Important masterpieces from all periods of music are performed throughout the year. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**545**	Symphony Orchestra	Masterpieces of symphony orchestra literature. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**546**	Sinfonietta	Symphonic orchestra that presents approximately six concerts annually, performing masterpieces of the classical repertoire. 3 times per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**550**	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**551**	Repertoire	Literature available for performance in all performing media. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**552**	Chamber Singers	Important masterpieces from all periods of music are performed. May be repeated for credit for a total of 8 hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**553**	Symphonic Chorale	4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**555**	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**557**	Women's Chorus	2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**561**	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**562**	Wind Ensemble	Rehearsal and performance of literature for wind ensemble. 4 hours per week. May be repeated for credit. Performing ensembl	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**563**	Chamber Winds	Rehearsal and performance of advanced literature for chamber winds. 4 hours per week. May be repeated for credit. Performing ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**570**	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**571**	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		

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MUP	**572**	Music Theatre: Orchestras	Participation in Lyric Opera Theatre productions. Section 1 (Orchestra); Section 2 (Chamber Orchestra); Section 3 (Chamber Ensemble). May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**573**	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**574**	Music Theatre: Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**576**	New Music Ensemble	Rehearsal and performance of music written in the last 20 years. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**579**	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**581**	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2.		Credit is allowed for only MUP 481 or MUP 581
MUP	**585**	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**586**	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**587**	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**588**	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**596**	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**597**	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1.		
MUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**727**	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours. Fee.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Pre-requisites: Doctoral music student with audition
MUP	**751**	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2.		
MUP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1.		
MUP	**796**	Solo Performance	May be repeated for credit.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**100**	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.		
MUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**298**	Honors Directed Study		N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**340**	Music for the Concert Hall, Stage, and Screen	Major periods, composers, and compositions in the history of music. In-depth study of examples from Western art music. Emphasizes aural analysis and synthesis of historical data with musical phenomena. Critiques the canon and its limits in specific instances.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & H	
MUS	**347**	Jazz in America	Current practices employed by contemporary jazz musicians; the historical development of jazz techniques. Credit does not apply to major requirements for music degrees.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C	

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MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**355**	Survey of American Music	Growth and development of American music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU	
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**410**	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3.	HU & C & H	
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Must be an Honors student
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUS	**340-W**	Listening to Music	Major periods, composers, and compositions in the history of music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**349**	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
MUS	**354**	Popular Music	Emphasizes historical, cultural, and performance patterns in a variety of popular idioms such as, but not limited to, rock, folk, jazz, and Afro-American music.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**356**	Survey of Musical Theatre	Music's place in Broadway musicals, viewed in terms of historical importance, cultural identity, and relative function. Fee (hybrid/Internet).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
MUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
MUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
MUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
MUS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
MUS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

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MUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
NAN	**505**	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**506**	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		
NAN	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311; PHY 315; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	**527**	Electroanalytical Chemistry	Theoretical and practical considerations for modern electroanalytical chemistry, including voltammetry, potentiometry, and microelectrode analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.		Pre-requisites: CHM 346 with C or better. Credit is allowed for only CHM 527 or NAN 527
NAN	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
NAN	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	**564**	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
NAN	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples across physics and astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
NAN	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NAV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
NEU	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**160**	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
NLM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		

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NLM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 210, PRM 210 or TDM 210
NLM	**220**	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**300**	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only NLM 301, TDM 301 or PRM 301
NLM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Prerequisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 semester hours. Students who have credit for TDM 302 or PRM 302 may not enroll in TDM 302
NLM	**310**	Volunteer Management	Administration of volunteer service programs. Studies and analyzes the volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**320**	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: For American Humanics students only
NLM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 410, PRM 401 or TDM 401 with C or better; Credit is allowed for only NLM 402, TDM 402 or PRM 402
NLM	**403**	Pre-Internship Workshop	Introduces and prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303, NLM 410, or TDM 372 with C or better; Students who have credit for PRM 403 or TDM 403, may not enroll in NLM 403
NLM	**410**	Social Entrepreneurship	In-depth study of social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Nonprofit Leadership and Mgmt or Recreation Management (nonprofit emphasis) major; minimum 2.50 cumulative GPA; 45 minimum hours; ENG 102, NLM 210, NLM 220 and MAT 142 or higher with C or better; Credit allowed only for NLM 562 or NLM 410
NLM	**420**	American Humanics Institute	National Management Institute for preparation of nonprofit professionals. Requires out-of-state conference.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-2		Pre-requisites: For American Humanics students only
NLM	**430**	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Senior standing; NLM 220 with C or better
NLM	**435**	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	DIS	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**451**	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
NLM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Senior standing; NLM 402, NLM 430, PRM 401, PRM 402, TDM 401 or TDM 402 with C or better; TDM 403, NLM 403 or PRM 403 (or REC 350 or REC 440) with C or better
NLM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student

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NLM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
NLM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
NLM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
NLM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
NLM	**510**	Foundations of Nonprofit Management	Explores the history and role of the nonprofit sector in American society; contemporary issues and delivery systems. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**520**	Financial Management in Nonprofit Organizations	Reviews funding structures utilized by nonprofit organizations; financial tools used by managers; fund raising practices and tools. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**530**	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**540**	Volunteer and Human Resources in Nonprofit Organizations	Managing the volunteer and paid staff human resources in nonprofit organizations; practices and theories. Lecture, case study.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**550**	Philanthropy: Theory and Practice	Provides overview of selected fundraising topics and insight into both the theory and practice of this area.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**555**	Strategic Management for Nonprofit Organizations	Evaluates vital areas of strategic management required for effective leadership of nonprofit organizations. Overview of areas of strategic management that help position nonprofit organizations and leaders to address opportunities and challenges to improve operational effectiveness.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Degree seeking graduate sutdent, or non-degree seeking graduate student
NLM	**560**	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**562**	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan. Credit is allowed for only NLM 562 or 410.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Credit is allowed for only NLM 410 or 562
NLM	**565**	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Must be a degree seeking graduate student or Non-degree seeking graduate student
NLM	**570**	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate within the complex management issues they face. Students determine their own skills and development needs regarding potential future employment.	N	SEM	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must be a degree seeking graduate student or Non-degree seeking graduate student.
NLM	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**584**	Internship		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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NLM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**610**	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
NLM	**620**	Critical Issues Facing Nonprofits	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Prerequisite: Master of Nonprofit Studies major
NTR	**100**	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 100 or 241
NTR	**142**	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nutrition (Food/Nutrtn Mngt), Nutrition (Human Nutrition), Nutrition (Dietetics), or Nutrition (Nutrition Comm) student
NTR	**150**	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NTR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**241**	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: CHM 101 or CHM 113 with D or better
NTR	**300**	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	CS	Pre-requisites: NTR 100 or 241
NTR	**320**	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NTR 100 or 241
NTR	**340**	Applications in Human Nutrition	Applies nutrient metabolism through case studies and product evaluations; special topics in human nutrition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BIO 201; NTR 241
NTR	**341**	Introduction to Planning Therapeutic Diets	Cultural, health, and economic aspects of planning therapeutic diets. Assessments of food and diet composition. Reviews common therapeutic diets. Credit is allowed for only NTR 341 or 345. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed FON 100 or FON 241 with D or better or NTR 100 or NTR 241 with D or better or currently enrolled
NTR	**343**	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**344**	Nutrition Services Management	Organization, administration, and management of food and nutrition services in hospitals and other institutions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: FON 100, FON 241, NTR 100 or NTR 241
NTR	**345**	Development of Healthy Cuisines	Principles and applications of nutrition and medical nutrition therapy; development of healthy cuisines in health and disease states. Credit is allowed for only NTR 345 or 341.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Students who have credit for NTR 341, may not enroll in NTR 345
NTR	**346**	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in FON 241 or NTR 241 or be currently enrolled AND earned D or better or currently enrolled in BIO 202
NTR	**348**	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	**350**	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisites: NTR 341 with C or better or NTR 345
NTR	**351**	Nutrition and Health Communications	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NTR 100 or 241

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NTR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**400**	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have completed NTR 440, NTR 441, or NTR 444 with D or better or be currrently enrolled AND earned D or better in NTR 341 or be currently enrolled.
NTR	**401**	Professional Practice in Food Service Management	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned D or better in NTR 343 or NTR 445 or be currently enrolled
NTR	**440**	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: BIO 202 with C or better; NTR 241 with C or better; NTR 340 with C or better; Credit is allowed for only NTR 440 or 540
NTR	**441**	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:You may not enroll in NTR 441, if you have credit for NTR 541; BIO 202 with D or better; BCH 361 with C or better; NTR 241 with D or better
NTR	**442**	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	**444**	Medical Nutrition Therapy	Principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 341 or FON 341 with C or better OR enrolled in NTR 341; BIO 202; Credit is allowed for only NTR 444 or 544
NTR	**445**	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or NTR 241 with D or better; NTR 142 and NTR 343 with D or better; Students who have credit for NTR 545, may not enroll in NTR 445
NTR	**446**	Human Nutrition Assessment Lecture/Laboratory	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must have earned C or better in BCH 361 and earned C or better in NTR 440 or NTR 441; Students who have credit for NTR 446, may not enroll in NTR 546
NTR	**448**	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	**450**	Nutrition in the Life Cycle I	Emphasizes nutritional needs and problems during pregnancy, lactation, infancy, and childhood.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	**451**	Nutrition in the Life Cycle II	Nutritional needs and problems of adults, particularly the elderly.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: NTR 100 or 241
NTR	**492**	Honors Directed Study		N	THE	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NTR	**493**	Honors Thesis		N	THE	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NTR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NTR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**501**	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**523**	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**525**	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**527**	Energy Balance and Weight Management	Reviews energy regulation, eating disorders, obesity, weight control methodologies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**529**	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**535**	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441
NTR	**537**	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**539**	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**540**	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 440 or 540

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NTR	**541**	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 441 or 541
NTR	**544**	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 444 or 544
NTR	**545**	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 445 or 545
NTR	**546**	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 446 or 546
NTR	**548**	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Credit is allowed for only NTR 448 or 548
NTR	**550**	Advanced Maternal and Child Nutrition	In-depth review of metabolic characteristics and nutritional needs of the pregnant woman, lactating woman, infant, and child.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NTR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		
NTR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NTR	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NTR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
NUR	**310**	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing undergraduate student; Co-requisites: NUR 311, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**311**	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student; Co-requisites: NUR 310, NUR 394: Psychomotor Skills for Professional Nursing Practice and NUR 320 (or NUR 484: Introduction to Nursing Practice I)
NUR	**314**	Health Assessment for Registered Nurses	Introductory knowledge and skills for systematic physical, psychosocial, and developmental nursing assessment over the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		

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NUR	**315**	Methods and Critical Appraisal for Evidence-Based Practice	Scientific and clinical inquiry, research methodology, and critical appraisal in the synthesis of research findings for application in evidence-based nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: NUR 310, NUR 311, NUR 394: Psychomotor Skills for Prof Nursing Practice) and NUR 330 with C or better; NUR 320 (or NUR 484: Intro to Nursing Practice I) with Y, OR RN-BSN student: NUR 391; NUR 392 with C or better
NUR	**320**	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Enrollment in upper division nursing program; Co-requisites: NUR 310, NUR 311 and NUR 394: Psychomotor Skills for Professional Nursing Practice
NUR	**323**	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Enrollment in upper division nursing program; NUR 310, 311, 394:Psychomotor Skills for Prof Nurs Pract with C or better; NUR 320 (or 484: Intro to Nurs Pract I) with grade of Y; Co-requisites: NUR 313 or 394:Nursing Concepts Adult Health
NUR	**330**	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**342**	Theory II: Health Integrity and Alterations	Concepts related to selected alterations in health integrity with focus on individuals, families, and groups. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate Nursing student, NUR 381 with C or better
NUR	**364**	Professional Development II: Nursing Research for RNs	Introduces concepts and issues in nursing research. Emphasizes quantitative and qualitative research processes, examination of nursing research literature.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student.
NUR	**391**	Professional Nursing Theory	Analyzes the multiple dimensions of contemporary professional nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.	L	Pre-requisite: ENG 101; ENG102 with C or better; Pre/Co-requisite: TWC 361
NUR	**392**	Registered Nurse Mobility II: Health and Wellness	Concepts of health integrity and community-based practice and professional nursing roles.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisties: Must be in Nursing
NUR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**413**	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**423**	Nursing Practice: Complex Care and Leadership and Management	Applies advanced psychomotor skills, leadership and management principles, and interprofessional collaboration for clients experiencing health alterations across the lifespan in multiple health settings. Fee.	N	LAB	N	P/F	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**430**	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Undergraduate nursing student.
NUR	**431**	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	L	Pre-requisites: Undergraduate nursing student; NUR 481 with C or better
NUR	**440**	Theory III: Health Integrity and Alterations for RNs	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student; must have completed NUR 392 with a grade of C or greater.
NUR	**441**	Theory III: Health Integrity and Alterations	Concepts related to health integrity and alterations with focus on individuals, families, groups, aggregates, and communities. Fee.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	6.		Pre-requisites: Undergraduate nursing student.
NUR	**444**	Theory IV: Health Integrity and Alterations for RNs	Advanced concepts related to health integrity and alterations in that integrity, with focus on selected client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 315, NUR 391, TWC 361 with C or better
NUR	**445**	Theory V: Leadership and Management for RNs	Selected theories and concepts of organizations, management, leadership with focus on selected client populations for experienced RNs.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**460**	Professional Development III: the Art of Nursing for RNs	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Must be an undergraduate nursing student.
NUR	**461**	Professional Development III: the Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.	HU	Pre-requisites: Upper Division Nursing Program students
NUR	**464**	Professional Development IV for RNs	Capstone professional development course for the RN student.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		Pre-requisites: Must be an undergraduate nursing student.
NUR	**481**	Nursing Practice III	Lab, clinical experiences. Fee.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	7.		Pre-requisites: NUR 313 (394:Nurs Conc for Adult Health), 314 (394:Nurs Conc for Psych/Mental Health), 315, 323 (484:NP Adult Health), 324 (484:NP Psych/Mental Health); Co-requisites: NUR 411 or NUR 498: Nurs Conc for Childbearing & Pediatric Clients
NUR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	**492**	Honors Directed Study		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		
NUR	**493**	Honors Thesis		N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6	L	Pre-requisites: Must be an Honors student
NUR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	**495**	Community Health/Home Health Practice for RNs	Theoretical content related to community and home healthcare. Clinical practice with individual, family aggregates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**496**	Leadership and Management Practice for RNs	Capstone leadership and management experience for the RN student that utilizes patterns of knowing in nursing practice. fee	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	5.		Pre-requisites: Undergraduate nursing student.
NUR	**497**	Honors Colloquium		Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-6		

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NUR	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-7		Pre-requisites: Upper Division Nursing Program students
NUR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-3		
NUR	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Graduate Nursing student; NUR 551 with B or better
NUR	**513**	Advanced Practice Nursing Role III	Third of three courses that focus on the examination and implementation of the advanced practice nurse role, emphasizing its major components and subcomponents.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Graduate Nursing student; NUR 512 with B or better
NUR	**521**	Psychiatric/Mental Health Nursing: Advanced Mental Health Assessment	Theories related to holistic health assessment for the promotion of physical/psychological health; develops skill in mental health assessments.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing student
NUR	**526**	Advanced Neonatal Physical Assessment	Develops assessment skills related to neonate/infant, including history-taking, physical, developmental, behavioral, cultural, and genetics assessment to provide comprehensive advanced practice neonatal nursing care. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		Pre-requisites: Nursing MS student or Non-degree seeking Graduate student; Co-requisite: NUR 525
NUR	**538**	Understanding & Applying Prin of Evidence-Based Care in Advanced Practice	Understanding how application of evidence-based practice principles assist advanced practice nurses and other healthcare professionals to provide best care.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**539**	Generating Internal Evidence and Validating Application of Evidence through Outcomes Management	Assists advanced practice clinicians to provide best care through generating and validating application of evidence using outcomes management.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**540**	Teaching Evidence-Based Practice	Focuses on strategies that have been demonstrated as effective methods for teaching evidence-based practice in academic and clinical settings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2.		
NUR	**541**	Application of Principles of Mentorship for Change toward Evidence-Based Practice	Assists advance practice nurses and other healthcare professionals to facilitate change toward evidence-based practice through mentorship.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**543**	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on disseminating evidence to advance best practice with an emphasis on advancing EBP in health policy and the media.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	4.		
NUR	**558**	Advanced Pediatric Health Assessment	Expansion of basic health assessment skills and development of clinical problem-solving skills for advanced practice nurses. Includes assessments of infants, children, and adolescents. fee	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites:Must be in NUNURDTMS,or NUPCNDTMS,or NUGRNONDGR; & received a B or > in NUR 551,500,552,554,, or co-enrolled.
NUR	**578**	Gestalt Therapy I	Introduces theory and methodology of Gestalt therapy and its uses for mental health promotion and restoration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**579**	Gestalt Therapy II	Focuses on further development of Gestalt therapy and its application in working with various client populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: NUR 578 with B or better
NUR	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing student
NUR	**581**	Advanced Nursing Practicum I: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Must be in Nursing MS or Nursing (Comm Health Adv Prac) ; AND co-enrolled in CHP 501 and completed NUR 500 with a grade of B or greater,.
NUR	**582**	Advanced Human Physiology	Analyzes major theories and concepts of human physiology. Explores interrelationship of physiology and health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-3		Pre-requisites: MS Nursing, AHN or non-degree Nursing student; NUR 500, 552 and 554 with B or better
NUR	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites:Must be in Nursing MS or Nursing (Comm Health Adv Prac); NUR 500, 551, 552 and CHP 502 with B or better; NUR 581 or 587 with B or better; Co-requisite: NUR 510
NUR	**587**	Advanced Nursing Practicum II: Community Health Nursing	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing MS or Nursing (Comm Health Adv Prac); NUR 581 with B or better; Co-requisite: CHP 502
NUR	**589**	Research Utilization	Emphasizes the synthesis and application of research to an identified clinical nursing problem. Must be repeated for credit.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-2		
NUR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		Pre-requisites: Nursing Graduate student
NUR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**601**	Professional Role Development in Nursing and Healthcare Innovation	Explores professional identity in nursing education, health policy, and research and how one's identity can influence individual, family, and community engagement in healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student
NUR	**602**	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing & Healthcare Innovation PhD student; Co-requisite: NUR 605
NUR	**603**	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**604**	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and phlosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**605**	Theories Related to Nursing and Healthcare Innovation	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**608**	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**609**	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**610**	EBP: Critical Appraisal/Synthesis-Evidence	Knowledge and skills in critical appraisal and synthesis of evidence to guide best practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**611**	Collaborative Inquiry	Seminar and immersion experience designed to foster student participation in multidisciplinary research teams to address nursing and health problems.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**612**	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**613**	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**614**	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**670**	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: MS Nursing (Nursing Education) or Graduate Certificate in Nursing Education; Pre/Co-requisite: NUR671 with B or better
NUR	**671**	Teaching in Academic and Practice Settings	Analyzes theories, issues, and research related to teaching in nursing. Focuses on the process of teaching/learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	**672**	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**673**	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	**679**	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		Pre-requisites: Nursing Graduate student

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NUR	**681**	Advanced Health Assessment of Older Adults Lab/Practicum	Skill-based course focused on advanced health assessment skills specific to older adults, including history-taking strategies, physical, functional, developmental, and psychosocial health assessment.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1.		
NUR	**682**	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**685**	Geriatric Practicum	Diagnosis, management and application of advanced knowledge and skills related to assessment, screening, and health promotion of older adults in a variety of settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Graduate students only
NUR	**686**	Management of Common Health Problems in Geriatrics	Provides theoretical foundation for advanced geriatric healthcare focusing on the epidemiology of aging and the effects of senescence on cognition and organ systems. Emphasizes the core concepts of aging, including health management and end of life care. Uses theory building approaches for applying health management process and outcomes to clinical practice and policy.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**687**	Geriatric Health Management Practicum	Diagnosis, management and application of advanced knowledge and skills for primary care of older adults with acute and age-associated conditions.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	2-6		Pre-requisite: Graduate students only
NUR	**688**	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	3.		
NUR	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	**692**	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing & Health Innovation	1-12		
NUR	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing & Health Innovation	1-15		
OMT	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
OMT	**343**	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
OMT	**401**	Statistics for Industry	Two-part online statistics with applications for the practitioner in industry. Includes data description, measures of central tendency and variability, probability, tests of hypotheses, regression analysis and analysis of categorical data.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: MAT 117 or higher
OMT	**402**	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**405**	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisite: Minimum Junior standing
OMT	**430**	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:School of Technology or Coll of Engr & Appl Sci Non-Degree plan or School of Technology BAS, BS, or MS Tech plan
OMT	**440**	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.	G	Pre-requisites: TMC 346 or BAS, MTECH or Non degree CTI or FSE Engineering students
OMT	**445**	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-10		Prerequisites: Minimum 2.25 GPA AND Minimum Junior standing AND Technology & Innovation BAS or BS student
OMT	**451**	Industrial Distribution and Materials Management	Surveys topics in industrial distribution, including, but not limited to, materials handling, purchasing, receiving, warehousing, traffic, inventory control, and shipping.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MSTech OR must have received a C or greater in TMC346 OR received a D or greater in IST346 or MGT301 (or becirrently enrolled in TMC346 or IST346 or MGT301

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OMT	**452**	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Engr & Appl Sci or Sch of Tech Plans: Non Degree or BAS or MS or MS Tech
OMT	**455**	Industrial Marketing Concepts	Customer and sales strategies for industrial organizations, including current practice and future planning.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites:Academic Level must be equal to or greater than a Junior AND must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346, OR be in a Schl of Tech Grad Plan
OMT	**456**	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**461**	Operations Management	Introduces supervisory principles as applied to production of goods and services.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: IMC 346 or IST 346 or MGT 301 or (TMC 346 AND APM 301) or STP 420, OR Engr & Tech & Innov: Non Degree or BAS or MS or MS Tech
OMT	**480**	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Prerequisites: Must have received a D or greater in IMC346 or IST346 or MGT301 or TMC346
OMT	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA
OMT	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		
OMT	**502**	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**503**	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**504**	Law and Ethics for Technical Professionals	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**520**	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre Requisites: Graduate or Non Degree Students Only
OMT	**540**	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**548**	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**549**	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**550**	Industrial Training and Development	Training techniques and learning processes. Planning, developing, evaluating, and managing industrial and governmental programs.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**560**	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
OMT	**570**	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites:You may not enroll in OMT 570, if you have credit for TMC 470
OMT	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		
OMT	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		

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OPM	**301**	Operations Management	Introduces the management of service and manufacturing conversion processes, with emphases on quality management and computer applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a Global Management student with conditional or professional status
OPM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	**502**	Management of Operations Technology	Design, control, and improvement of operations technology. Concepts and modeling tools required for strategic decisions in manufacturing and service operations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
OPM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**300**	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**301**	Applied Statistics	Focuses on statistical techniques used in social science research. Applies concepts such as measures of central tendency and dispersion as well as statistical techniques, including the following: one-sample z and t tests, two-sample t tests, chi-square, and correlation. Goals include helping students understand the mathematical and statistical concepts presented and assisting them in using these concepts in everyday life and in the study of social sciences.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	CS	Pre-requisites: MAT 142 or higher
PAF	**340**	Public Policy	Develops conceptual, critical, and practical understanding of public policy, the policy process, and policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Minimum 30 hours
PAF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**410**	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**411**	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	SB	
PAF	**420**	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**460**	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**492**	Honors Directed Study		Y	LEC	Y	CNV	College of Public Programs	School of Public Affairs	1-3		
PAF	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
PAF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
PAF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-3		

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PAF	**501**	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	**502**	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**503**	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**504**	Public Affairs Economics	Basics of public sector economics, microeconomic and macroeconomic concepts applied to public sector decisions and policies.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**505**	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 with C or better
PAF	**506**	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 504 completed with C or better or currently enrolled
PAF	**507**	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**508**	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**509**	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	**520**	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**522**	Public Labor Relations	Rise of public unionism, managerial policy toward unionism, conflict resolution; impact of unionism on budgets, personnel policies, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**523**	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**525**	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**529**	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**530**	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**531**	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**534**	Urban Infrastructure	Covers various types of infrastructure operated by local governments and the issues related to management of those various public assets.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**536**	Urban Policy Making	Analyzes the opportunities and costs of influencing public policy and the roles of officials and bureaucracies in decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**540**	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 505 with C or better
PAF	**541**	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 501 with C or better
PAF	**546**	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**547**	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Credit is allowed for only BIO 515, GLG 547, PAF 547 or SOS 516
PAF	**548**	Women/Politics/Publc Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**549**	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**551**	Computers in Administration	Experience in use of computer technology for public administration problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**562**	Intergovernmental Relations	Evolution, growth, present status, and characteristics of the U.S. federal system of government. Federal-state relations, state-local relations, regionalism, councils of government, interstate cooperation, grants-in-aid, and revenue sharing.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	**564**	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**570**	Urban Economics and Public Finance	Examines microeconomics at the intermediate level, along with topics in urban microeconomics focusing on issues of urban finance and taxation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**571**	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**572**	Urban Demography	Focuses on basics of demographic analysis, including natality, migration, and mortality. Emphasizes use of demographic analysis for urban problem solving.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**573**	Advanced Regression	Examines more advanced regression topics, such as limited dependent variable analysis, time-series analysis and forecasting techniques, and simultaneity.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: PAF 502 with C or better
PAF	**574**	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**579**	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	L	
PAF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
PAF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	**601**	Seminar:Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
PAF	**602**	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral PAF student
PAF	**603**	Seminar: Organization and Behavior in the Public Sector	Structure, organization, conduct, and performance of public sector institutions in the administration of public policy.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisite: Doctoral student
PAF	**604**	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student; PAF 602
PAF	**610**	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: PhD student
PAF	**620**	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: Doctoral PAF student
PAF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		

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PAF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-12		
PAF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-15		
PAF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Public Affairs	1.		
PAF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Public Programs	School of Public Affairs	1-15		
PE	**123**	Tumbling		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Kinesiology	0.5		
PGM	**100**	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**110**	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**111**	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	**112**	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**113**	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**114**	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**120**	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**130**	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit. Fee.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**150**	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**166**	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		
PGM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**200**	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**250**	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**300**	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**350**	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**367**	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes. fee	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	4.		
PGM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGM	**400**	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1.		
PGM	**463**	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	3.		

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PGM	**466**	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	2.		
PGM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-12		
PGM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness and Resource Mgmt	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**222**	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**244**	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PGS	**270**	Psychology of Adjustment	Principles of mental health, adjustment, conflict, stress, and coping processes derived from clinical and experimental research. Intended for nonmajors; cannot be used for major credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled

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PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**351**	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes. Open only to students without previous credit for PGS 350.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	
PGS	**365**	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 315 (or 350 or 351) with C or better; PSY 290 with C or better
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**395**	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with C or better. Students who have credit for REL 395, may not enroll in PGS 395
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PGS	**414**	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PSY 290 with C or better
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**441**	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**445**	Child Language and Drawing	Language acquisition and developmental changes in drawing, considered in the context of cognitive developmental stages. Children's representation and communication of knowledge through language and drawing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**451**	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**452**	Applied Social Psychology	Studies applications of social psychological theory and concepts in natural settings; research design and data analysis. Lecture, lab-type activities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PGS 350 or 351 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**458**	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 350 (or 351) with C or better; PSY 290 with C or better
PGS	**461**	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: PSY 290 with C or better; PGS 350 or 351 with C or better
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**464**	Minority Issues in Psychology	Psychological issues relating to the diversity of human cultural experiences among ethnic minorities in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**471**	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PGS 443 or 466 with C or better

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PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PGS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Pre-requisites: Must be a Graduate student, either degree seeking or non degree seeking
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**250**	Psychology and Society	Addresses how social and behavioral science theory and research are used to understand behavior related to various social issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
PGS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**304**	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: MAT 119 (or MAT 170 or higher) or PSY 230 with C or better
PGS	**306**	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**315**	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**341**	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**344**	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 341 (or CDE 232 or ECD 211) with C or better
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGS	**370**	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 101 with C or better
PGS	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
PGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**399**	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications. Y grade only.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
PGS	**427**	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed PSY 290 with C or better
PGS	**430**	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisite: Must have earned earned C or better or currently enrolled in MGT 301 or earned C or better or currently enrolled in PGS 101
PGS	**443**	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: Must have completed one of the following: PGS 315, 341, 350 or 351 with a grade of C or greater or be currently enrolled; Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PGS	**444**	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 341 with C or better; PSY 290 with C or better

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PGS	**446**	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	Pre-requisites: PGS 341 with C or better; PSY 290 with C or better
PGS	**453**	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: Must have earned C or better or currently enrolled in PGS 350
PGS	**462**	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**465**	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 315, 350 or 351 with C or better; PSY 290 with C or better
PGS	**466**	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have completed MUE 381 or PSY 290 with a grade of C or greater or be currently enrolled
PGS	**468**	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PGS	**472**	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 443 or 466 with C or better
PGS	**473**	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101 with C or better; PGS 341 with C or better; PSY 230 with C or better; PSY 290 with C or better
PGS	**480**	Cross-Cultural Social Psychology	Focuses on patterns of social behavior in individualistic and collectivistic cultures. Includes multidisciplinary research using qualitative and quantitative methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: PGS 101 with C or better; PGS 350 with a C or better
PGS	**482**	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: PGS 350 with C or better
PGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PGS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: PSY 290 with C or better
PGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PGS	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PGS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PGS	**101**	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
PGS	**350**	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Must have completed PGS 101 with a grade of C or greater or be currently enrolled
PGV	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PGV	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

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PGV	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**300**	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L	
PHI	**301**	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**302**	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
PHI	**304**	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**305**	Ethical Theory	Current theories about the nature of morality (metaethics) and about what is right and wrong (normative ethics).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**307**	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**308**	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**309**	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**310**	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**312**	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**313**	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: MAT 119 (or higher); Minimum 30 hours; Credit is allowed for only HPS 313 or PHI 313

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PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**315**	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**316**	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**317**	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**319**	Philosophy of Computing	Philosophical problems surrounding the theory of computation. Turing machines, mind and AI, neural network computing, ethics, and epistemology of computing.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	CS	
PHI	**320**	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**325**	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
PHI	**333**	Introduction to Symbolic Logic	Symbolic techniques, emphasizing deductions and proofs in the propositional and 1st-order predicate calculi.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**335**	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**390**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 390, PHI 390 or REL 314
PHI	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only PHI 391 or REL 391
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**401**	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**402**	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**403**	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
PHI	**413**	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**420**	Topics in Philosophy	Course descriptions on file in department. May be repeated for credit.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**428**	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 314 with a C or better. Students who have credit for MIC 428, may not enroll in PHI 428
PHI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**493**	Honors Thesis		N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
PHI	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
PHI	**501**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PHI	**502**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit for AEP 502, PHI 502 or REL 582
PHI	**550**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
PHI	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	THE	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
PHI	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**318**	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**324**	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**340**	Bioethics	Philosophical exploration of ethical issues in healthcare delivery and the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**360**	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**406**	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101 or ENG 105 with C or better. Credit is allowed for only IAS 406 or PHI 406
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	**408**	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	

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PHI	**409**	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
PHI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
PHI	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
PHI	**101**	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**103**	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
PHI	**105**	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**120**	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**306**	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**311**	Philosophy in Literature	Selected works of literature introducing philosophical problems such as the nature of moral goodness and people's relation to the world and other people.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
PHI	**314**	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHI	**407**	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHL	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PHL	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
PHS	**110**	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	**208**	Patterns in Nature	Online hybrid physics course examining topics from optics to analytical techniques. Mandatory two (2) on-campus lab meetings. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in physical science and physics. Requires weekly reflective reading and writing. May be repeated for credit. Fee.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	3.	C	
PHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		

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PHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**505**	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**531**	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**534**	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**540**	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**542**	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**550**	Physics and Astronomy	Astronomy curricula and projects for secondary school, with emphasis on the role of physics in astronomy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**556**	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**564**	Light and Electron Optics	Principles and practice of electron-optical instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**570**	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**581**	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		

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PHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	
PHY	**105**	Basic Physics	One-semester survey of the principles of physics. Primarily for students who intend to take PHY 121, 131 but have not taken high school physics.	N	REC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: PHY 111 with C or better
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**121**	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	**122**	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	**131**	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	**132**	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit. fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	**150**	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisites: MAT 266 or MAT 271 with C or better if completed
PHY	**151**	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 150 or PHY 121 and PHY 122 with C or better; Pre or Co-requisite: MAT 267 or MAT 272 (with C or better if completed)
PHY	**190**	Seminar: Physics as a Curriculum and a Profession	Seminar for new Physics majors. Instruction and information on curriculum, departmental functions, and professional preparation. Weekly meetings and excursions. Pass/fail grading.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**201**	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3.	CS	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	**241**	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 131
PHY	**252**	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4.	SQ	Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY131 and PHY132) with C or better
PHY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**302**	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY201 with C or better
PHY	**310**	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	**311**	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	**314**	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	**315**	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**321**	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**331**	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**333**	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	**334**	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	2.		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better; Co-requisites: PHY 314, PHY 361, CHM 345 or EEE 434
PHY	**361**	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**412**	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 311 with C or better
PHY	**416**	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation. fee	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisite: PHY 315 with C or better
PHY	**420**	Research Paper	Scientific report writing. Culminates in a paper based on library or lab research or both. Taken in conjunction with other courses as approved.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of Physics	1.	L	
PHY	**441**	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**452**	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better
PHY	**462**	Particle and Nuclear Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**465**	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 334 with C or better
PHY	**466**	Advanced Laboratory III	Continuation of PHY 465. fee	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisite: PHY 465 with C or better
PHY	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**481**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure. Credit is allowed for only PHY 481 or 511.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	**482**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 482 or 512.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 481 with C or better. Students who have credit for PHY 512, or MSE 527, or NAN 512, may not enroll in PHY 482
PHY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Pre-requisites: Must be an Honors student
PHY	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Pre-requisites: Must be an Honors student
PHY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**495**	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		
PHY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**511**	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Pre-requisites: PHY 311 and PHY 315; Credit is allowed for only NAN 511, MSE 526, PHY 481 or PHY 511.
PHY	**512**	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics. Credit is allowed for only PHY 512 or 482.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**521**	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**523**	General Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**531**	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**532**	Advanced Topics in Electrodynamics	Electromagnetism of dielectric media, magnetic media, and superconductors; introduction to magnetohydrodynamics, laser physics, and nonlinear optics; additional special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**541**	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**542**	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**544**	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only CHM 544, NAN 544 or PHY 544
PHY	**546**	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	**552**	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		If you have credit for MSE 552, or NAN 552, or SEM 552, you may not enroll in PHY 552
PHY	**553**	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**554**	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**555**	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**567**	Relativistic Quantum Mechanics and Field Theory	Relativistic quantum mechanics and introduction to the quantum field theory of scalar, spinor, and electromagnetic fields. QED through renormalization theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**568**	Particle Physics Phenomenology	Hadron physics, internal symmetry groups, weak interactions, lepton and quark phenomenology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**569**	The Standard Model and Beyond	Introduces and applies the standard model of strong and electroweak interactions. Special topics include recent developments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**571**	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		Credit is allowed for only NAN 571 or PHY 571
PHY	**576**	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**577**	Advanced Quantum Theory	Scattering in three dimensions, second quantization of bosons and fermions, quantization of electromagnetism, addition of angular momenta, electronic structure of atoms and molecules, introduction to relativistic quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		

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PHY	**581**	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**582**	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3.		
PHY	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1.		
PHY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	**101**	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	SQ	
PHY	**111**	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: MAT 170 (or higher) with C or better or minimum score of 60% on the ALEKS Math Placement Test or Co-requisite: MAT 210 (or higher)
PHY	**112**	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	SQ	Pre-requisites: must have completed PHY 111 with a grade of C or greater, or be currently enrolled in PHY 111

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	**113**	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	**114**	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1.	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
PLA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**412**	Landscape Ecology and Planning	Reviews the evolution of landscape ecology and landscape planning and examines use and value.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**413**	Southwest Landscape Interpretation	Explores methods and implications of landscape interpretation within the American Southwest.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.		
PLA	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	3.	HU	
PLA	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6		
PLA	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-6	L	Pre-requisites: Must be an Honors student
PLA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-7		
PLA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-3		
PLA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-4		
PLA	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1-12		
PLA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Architecture and Landscape Architecture	1.		
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	L	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**108**	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	SQ	
PLB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**200**	Biology of Plants	Analyzes the structure/function interaction for plant cells and tissues and properties that emerge in whole plants. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	SQ	
PLB	**201**	Biology of Plants Laboratory	Lab/field experiments to teach techniques and protocols of the scientific process; reinforces concepts from lecture by asking questions and solving problems. Both PLB 200 and PLB 201 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1.	SQ	
PLB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.	L or SG	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**302**	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**305**	Cacti and Succulents	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181, 182 (or PLB 200 and 201); CHM 116 with C or better
PLB	**306**	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**320**	Environmental Science (Nonmajor)	Environmental and biological concepts used to understand ecological systems with specific references to problems caused by humans. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	G	
PLB	**350**	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: MBB 247 or BIO 340 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	**400**	Lichenology	Chemistry, ecology, physiology, and taxonomy of lichens.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**401**	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**402**	Service Learning	K-12 tutoring and mentoring internship related to academic course work in plant biology; requires weekly reflective reading and writing.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	C	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**404**	Phycology	Algae (both fresh water and marine forms), emphasizing field collection and identification of local representatives. Morphological, ecological, and economic aspects of the algae. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**407**	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**411**	Trees and Shrubs of Arizona	Identification of woody plants from desert, chaparral, and forest habitats in Arizona. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**414**	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	L	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**416**	Medical Botany	Explores plants affecting human health: modern- and folk-usage medicinal plants. Quality control, clinical evidence, plant chemistry, and ethnopharmacology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better

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PLB	**420**	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**421**	Plant Ecology: Communities and Ecosystems	Plant community organization, field sampling techniques, and the structure and function of terrestrial ecosystems emphasizing the role of vegetation. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 320 with C or better
PLB	**422**	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: GPH 111 or BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only GPH 422 or PLB 422
PLB	**432**	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 406 or PLB 432
PLB	**440**	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; Credit is allowed for only BIO 464 or PLB 440
PLB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**492**	Honors Directed Study		Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Must be an Honors Student
PLB	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Pre-requisites: Must be an Honors student
PLB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**495**	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Junior or senior standing; Credit is allowed for only BIO 495, MBB 495, HPS 495, MIC 495 or PLB 495
PLB	**496**	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters,	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		Pre-requisites: Junior or senior standing; Credit is allowed for only MBB 496, BIO 496, MIC 496 or PLB 496
PLB	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
PLB	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	**502**	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**525**	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**530**	Introduction to Structural and Molecular Biology	Structure and function of cells, proteins, membranes, and the genome; gene expression and biogenesis of structures; application of computer imaging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4.		
PLB	**540**	Plant Biochemistry	Structure/function relationships of molecules, emphasizing processes unique to plants: carbon fixation, synthesis of storage products, pigments, and secondary metabolites.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**550**	Plant Molecular Biology	Biochemistry and molecular biology of plant organelles, including protein targeting, plant viruses, and molecular designs for plant improvements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**552**	Plant Genetic Engineering	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**553**	Plant Genetic Engineering Laboratory	Plant transformation, utilization of transgenetic plants, transient gene expression assays, and applications of plant genetic engineering.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2.		
PLB	**554**	Plant Biotechnology	Aseptic, clonal propagation of plants and in vitro culture of cells, organs, and tissues.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**558**	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3.		
PLB	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1.		
PLB	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	**300**	Comparative Plant Diversity	Surveys major plant groups and other photosynthetic organisms. Emphasizes comparative data analysis, evolutionary inference, and phylogenetic methods. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.	L or SG	Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLB	**308**	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better; and CHM 116 with C or better
PLB	**310**	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species. Fee.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	4.		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better
PLC	**101**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**102**	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 101 with D or better or currently enrolled
PLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**201**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
PLC	**202**	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Pre-requisites: PLC 201 with D
PLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	**492**	Honors Directed Study		N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
PLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
PLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
POR	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:POR 101 with a grade of C or better or currenlty enrolled
POR	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**313**	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 201 with C or better
POR	**314**	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: POR 313 with C or better
POR	**321**	Luso-Brazilian Literature	Representative masterpieces of Portuguese and Brazilian literature from the beginning to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: POR 313 with C or better
POR	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**472**	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	Pre-requisites: POR 313 with C or better
POR	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
POR	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
POR	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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POR	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
POR	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	**101**	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.		
POR	**201**	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency. fee	N	LEC	N	OPT	Office of the Provost	Office of the Provost	5.	G	
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**220**	Political Issues and Public Policy	Contemporary social problems and political issues, particularly development of public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L or SB	
POS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	
POS	**270**	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**300**	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**301**	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**305**	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**311**	Arizona Constitution and Government	Constitution and government of the State of Arizona. Credit is allowed for only POS 311 or 316 or 417. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2.		
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**315**	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	

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POS	**316**	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States. Credit is allowed for only POS 316 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**320**	Public Administration	Role of the administrator in the political process with an examination of the basic concepts of bureaucracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**330**	Contemporary Controversies in Domestic Politics	Explores key controversies in domestic politics including the environment, the economy, poverty, gender, race, and security.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**332**	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**333**	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**340**	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**341**	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**356**	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**357**	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**358**	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**359**	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Sahara Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**368**	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**370**	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**401**	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	CS	Pre-requisite: POS 301
POS	**410**	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**426**	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**431**	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**435**	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**439**	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & C	
POS	**442**	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**443**	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU	
POS	**451**	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**452**	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**453**	South America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**465**	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**467**	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**468**	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**471**	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**472**	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**473**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**485**	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
POS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
POS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS	**501**	Methods of Political Science	Problems of method and knowledge in political science, strategies of political inquiry, and issues in philosophy of social science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**502**	Philosophy of Political Inquiry	Problems of knowledge and method in political science, with attention to both empirical and evaluative analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2-3		
POS	**503**	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: Political Science student
POS	**530**	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**545**	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**550**	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**560**	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**563**	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**601**	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**602**	Advanced Survey Research	Presents design and conduct of political surveys, including sampling, instrument design, scaling, and statistical and graphical analysis of survey data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**603**	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**604**	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**606**	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**636**	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**638**	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**651**	Politics of Change and Development	Examines contending approaches to national, social, and political change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**661**	The State	Examines theories of state, state-society relations, and interstate politics emphasizing questions of sovereignty, territoriality, violence, representation, democracy, and change.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**664**	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
POS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1.		
POS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	**540**	Ancient Political Theory	Surveys the historical and philosophical developments in political thinking from the ancient Greeks up to the Renaissance. The world studied predominantly is one of profound political conflict and change. Moves from the Greek cities to the edge of modern political developments. The movement encompasses the political transformation from city-states to empires to the establishment of an overarching Christian world order that balances secular and sacred power, only to be challenged if not foundationally shaken by Machiavelli and realism.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		Pre-requisites: Maximum 25 hours
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L or SB	
POS	**247**	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & G	
POS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**313**	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**314**	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**331**	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**342**	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	HU or SB	
POS	**343**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**354**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**361**	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**362**	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems. Credit is allowed for only POS 362 or 160.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Credit is allowed for only POL 360, POS 160 or POL 160.
POS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**436**	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**437**	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**438**	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**444**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**446**	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
POS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
POS	**454**	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**456**	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**460**	Politics of Globalization	Theories and analysis of the politics of economic and technological globalization in the contemporary world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**464**	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
POS	**470**	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
POS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
POS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
POS	**486**	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	

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POS	**492**	Honors Directed Study		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
POS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
POS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
POS	**110**	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 110 or 310.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not enroll for POS 110 who have received a D or better in POS 310, POL 110, or POL 310
POS	**150**	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**160**	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas. Credit is allowed for only POS 160 or 362.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Students may not enroll in POS 160 if they have received a D or better in POL 160, POS 360, or POL 360.
POS	**210**	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**230**	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
POS	**260**	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or SB) & G	
POS	**310**	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification. Credit is allowed for only POS 310 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: Students may not enroll in POS 310 if they received a D or better in POS 110, POL 110, or POL 310
POS	**325**	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**336**	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**346**	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
POS	**350**	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**351**	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**360**	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras.	N	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
POS	**364**	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
POS	**417**	Arizona Political System	Contemporary political problems within the context of Arizona's constitutional, political, and social frameworks. Meets the Arizona Constitution requirement for teacher certification. Credit is allowed for only POS 417 or 311.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**434**	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
POS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
PPE	**550**	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 550 or 350. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**555**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 555 or 355. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**560**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 560 or 360.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PPE	**565**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards. Credit is allowed for only PPE 565 or 365.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**570**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 570 or 370.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**575**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 575 or 375.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**576**	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**585**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields, with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**593**	Applied Project		Y	LEC	Y	CNV	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PPE	**210**	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**215**	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**220**	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**225**	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	2.		
PPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**350**	Physical Education for the Elementary School	Scope and values of physical in elementary schools. Methods, materials, and practices in teaching for primary through upper grades. Credit is allowed for only PPE 350 or 550. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Students who have credit for PPE 550, may not enroll in PPE 350
PPE	**355**	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration. Credit is allowed for only PPE 355 or 555. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**360**	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities. Credit is allowed for only PPE 360 or 560.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**365**	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**370**	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy. Credit is allowed for only PPE 370 or 570.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	
PPE	**375**	Coaching Methods for Youth Sports	Scope and values of coaching K-12. Methods, materials, and practice in coaching philosophy. Best practices and activities for grades K-12. Credit is allowed for only PPE 375 or 575.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**474**	Field Experience in Physical Education	Analyzes course content in an elementary/secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment. fee	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		
PPE	**480**	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
PPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
PPE	**495**	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
PRM	**120**	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	

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PRM	**150**	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
PRM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**210**	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD, NLM, PRM or TDM 301
PRM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with C or better; Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
PRM	**303**	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: NLM 160 or PRM 120 with C or better; MAT 142 with C or better ; ENG 102, 105, or 108 with C or better; Minimum 2.5 GPA
PRM	**304**	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Parks & Rec Mgmt, Rec & Tourism or Nonprofit Leadership & Mgmt student; Minimum 2.50 cumulative GPA; Minimum 45 hours; MAT 142 or better; PRM 210 (or NLM 210, TDM 210) with C or better
PRM	**311**	Leadership in Recreation and Tourism	Leadership theory and strategies applied to recreation and tourism settings, emphasizing group dynamics, motivational processes, and supervisory skills.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have a GPA of 2.0 or greater
PRM	**315**	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM120 (REC120) with C or better
PRM	**320**	Talent and Entertainment Concepts	Provides theory and skill development focused on management, marketing, finances, facilities, equipment, and operations related to coordinating entertainment elements.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 486 (or RTM 486) with C or better
PRM	**321**	Event Protocol, Ethics, and Etiquette	Theoretical and practical focus on the special elements of protocol, ethics, and etiquette as they apply to special events management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**322**	Special Event Programming	Provides a theoretical and practical base related to planning, organization, and coordination of activity elements that comprise the special events program.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**323**	Special Event On-Site Operations	Theory and practical skills focused on security, parking, traffic, waste management, transportation, communication, storage, and other operational issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**324**	Festival Site Design	Provides both a theoretical basis and practical skills focused on how to physically design and lay out a special event.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**325**	Working with Subcontractors and Vendors	Theory and skills focused on equipment rentals, food and beverage vendors, arts and crafts vendors, commercial vendors, and other subcontracted entities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**326**	Sponsorship	Provides theory and practical skills focused on selling, partnership, benefit/assets, and leverage concepts of sponsorship for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**327**	Creative Event Revenue Production	Provides both theoretical and practical skills focused on earned income and other alternative financing for special events.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better
PRM	**328**	Budgeting and Accounting for Special Events	Focuses on details related to budgeting, accounting, and financial controls used in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 486 with C or better

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PRM	**340**	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	FLD	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**355**	Team-Building Strategies	Explores the concepts and strategies for facilitating team building, self-confidence, and positive self-esteem in situations across the lifespan.	N	LEL	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**364**	Foundations of Therapeutic Recreation	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB	
PRM	**368**	Sports Management	Introduces concepts of sports management in varied leisure delivery systems.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**370**	Natural Resource Recreation Planning and Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: Must have completed 45 or more earned hours
PRM	**380**	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	SB & H	
PRM	**388**	Business Practices for Special Event Management	Emphasizes personnel, strategic planning, marketing, risk management, legal issues, and professionalism in special event management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisite: PRM 486 with C or better
PRM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**400**	Processes and Techniques in Therapeutic Recreation	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: must have completed PRM364 or REC364 with a grade of C or greater or be currently enrolled
PRM	**401**	Tourism Management	Principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 210 or PRM 210 with C or better; TDM 301 or PRM 301 with C or better; PRM 303 or TDM 372 with C or better. Students who have credit for TDM 401, may not enroll in PRM 401
PRM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better; Credit is allowed for only NLM 402, PRM 402 or TDM 402
PRM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisite: PRM 303 or TDM 372 with C or better; Students who have credit for TDM 403 or NLM 403 may not enroll in PRM 403
PRM	**406**	Program Design and Evaluation in Therapeutic Recreation	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: PRM 364 (or REC 364) and PRM 400 (or REC 400) with C or better if completed
PRM	**424**	Recreation Program Management	Provides nonmajors with an in-depth look at recreation program management in a variety of settings with diverse groups.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: NLM 160 or PRM 120 (REC 120) with C or better or currently enrolled; Not open to Parks & Recreation Management, Recreation (Management concentration) or Nonprofit Leadership & Management majors.
PRM	**450**	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**451**	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**453**	Volunteer Management in Human Service Organizations	Administration of volunteer service programs. Study and analysis of volunteer personnel process.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**454**	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**460**	Assessment and Documentation in Therapeutic Recreation	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 364 (REC 364) and PRM 400 (REC 400) with C or better or currently enrolled
PRM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Pre-requisites: Parks and Recreation or Recreation (Management concentration) student; PRM 402 (REC 482) and PRM 403 (REC 499 Pre Internship Workshop) with C or better

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PRM	**470**	Environmental Interpretation and Education	Introduces park interpretation and environmental education that includes theories, principles, and techniques.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 380 with C or better
PRM	**475**	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or REC 120 with C or better
PRM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	**486**	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
PRM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
PRM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
PRM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
PRM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
PRM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
PRM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: Must have earned C or better in PSY 290 or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**360**	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisite- Mus have earned C or better in PSY 290 or currently enrolled
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.	L	Pre-requisites: PSY 290 with C or better

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PSY	**438**	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**439**	Training and Skill Acquisition	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**440**	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**448**	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**449**	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisite: PSY (PGS) 101 with C or better
PSY	**477**	Applied Psychology Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-6		
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-3		
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**560**	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**561**	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**562**	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**563**	Advanced Industrial and Organizational Psychology	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-12		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Faculty of Applied Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Tech & Innovation	Faculty of Applied Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Pre-requisites: Freshman; 25 or less total earned hours
PSY	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**231**	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	CS	Pre-requisites: Barrett Honors student; MAT 119, MAT 170, MAT 242, MAT 251 or higher with C or better; PGS 101 with C or better
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**390**	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**399**	Supervised Research		Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**420**	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 and 320 with C or better
PSY	**424**	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 325 with C or better
PSY	**426**	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: PSY 325 with C or better; Credit is allowed for only PSY 526 or PSY 426
PSY	**427**	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: MIC 420, or PSY 325, or PSY 425, or BIO 467 with C or better. Students who have credit for MIC 427, may not enroll in PSY 427
PSY	**434**	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 323 or PSY 324 with C or better
PSY	**437**	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.	L	Pre-requisites: PSY 290 with C or better
PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: PSY 325 AND one of the following: BIO BIO 181 (or 188), 182 (or 187), 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with C or better
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**497**	Honors Colloquium		Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Pre-requisites: Must be an Honors student
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Pre-requisites: Must have completed PSY 290 with a grade of C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	**501**	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**512**	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**526**	Neuroanatomy	Covers the structure and function of the mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Graduate student; students who have credit for PSY 426 may not enroll in PSY 526
PSY	**528**	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**530**	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**531**	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**532**	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**533**	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**534**	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**535**	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**536**	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**537**	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**538**	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**541**	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**542**	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**551**	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**555**	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**568**	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**572**	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**574**	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**576**	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		
PSY	**578**	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**582**	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1.		
PSY	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		
PSY	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**515**	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Psychology MS student
PSY	**550**	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**573**	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PSY	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		
PSY	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
PSY	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
PSY	**230**	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PGS 101 with C or better; Must have completed one of the following with C or better: MAT 119, 170, 210, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291
PSY	**290**	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	4.	L or SG	Pre-requisites: ENG 101 with C or better or currently enrolled; PSY 230 or one of the following courses with a C or better or currently enrolled: ECN 221, JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**320**	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**323**	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Applies current research and theory in a lab environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PGS 101, PSY 230 and PSY 290 with a C or better or currently enrolled
PSY	**324**	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better
PSY	**325**	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	**330**	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: PSY 230 or one of the following courses with C or better: JUS 302, POS 401, QBA 221, SOC 390, SOC 395 or STP 226
PSY	**369**	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY (PGS) 101 with C or better; completed one semester of Biology
PSY	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**425**	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	L	Pre-requisites: PSY 325 with C or better

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PSY	**470**	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: PSY 325 AND one of the following: BIO BIO 181 (or 188), 182 (or 187), 201, 202, ZOL 201 or ZOL 202 AND one of the following: CHM 113, 114, 115, 116, 117 or 118, with C or better
PSY	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
PSY	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
PSY	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
PSY	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
PSY	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
PSY	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		Pre-requisite: PGS 399 with C or better
PUB	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	**501**	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
PUB	**502**	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**503**	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**510**	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	DIS	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**580**	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**592**	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	THE	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	**100**	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**190**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(HU or SB) & G	
PUP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		

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PUP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**200**	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU & H & G	
PUP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**301**	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	
PUP	**361**	Introductory Urban Planning Studio	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills. Fee.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**363**	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Design Studies, Urban Planning or Housing & Urban Develpmnt undergraduate student
PUP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**410**	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**412**	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	(L or HU) & H	Pre-requisites: PUP 301 with D or better; 45 completed hours; Credit for APH 414 or PUP 412 only
PUP	**420**	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	HU	Pre-requisite: PUP 301 with C or better
PUP	**424**	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisite: PUP 301 with C or better
PUP	**425**	Urban Housing Analysis	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical assignments and in-depth research projects are required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a D or better; 45 completed hours.Students who have credit for PUP 525 may not enroll in PUP 425
PUP	**430**	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**432**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**433**	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Senior student; PUP 301with C or better
PUP	**434**	Urban Land Economics	Interaction between space and economic behavior. Examines the use and value of land through economic theories. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a D or better; 45 completed hours
PUP	**436**	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better
PUP	**441**	Economics of Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better; Credit is allowed for only PUP 541 or PUP 441
PUP	**442**	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisite: PUP 301 with C or better

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PUP	**444**	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students. Credit is allowed for only PUP 527 or PUP 444
PUP	**445**	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**452**	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.	L	Pre-requisite: PUP 301 with C or better
PUP	**462**	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with C or better. 45 hours earned.
PUP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	**485**	International Field Studies in Planning	Organized field study of planning in specified international locations. May be repeated for credit with school approval.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: PUP 301 with C or better. Students who have credit for PUP 585, may not enroll in PUP 485
PUP	**490**	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 credit hours; Credit is allowed for only ASB 490 or PUP 490
PUP	**492**	Honors Directed Study		N	IND	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		
PUP	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Pre-requisites: Must be an Honors student
PUP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**501**	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**510**	Citizen Participation	Theory and practice of citizen participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**515**	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**516**	International City Design	Comparative exploration of the physical design and structure of international cities and the social, economic, and cultural forces shaping them.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**520**	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**524**	Planning Methods I	Methods for urban planning research. Emphasizes research design, demographic analysis, forecasting, and survey research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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PUP	**525**	Urban Housing Analysis	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	**526**	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**527**	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student. Credit is allowed for only PUP 444 or 527
PUP	**531**	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**535**	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**541**	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 441 or 541
PUP	**542**	Environmental Administration and Planning	Environmental administration of policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**544**	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Students who have credit for PUP 547 may not enroll in WST 547
PUP	**548**	Planning for Urban Environmental Sustainability	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**550**	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**551**	Sustainable Transportation Planning	Discusses the sustainability aspects of transportation planning. Emphasizes nonmotorized transportation, facilities, and public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisities: Graduate student; Credit is allowed for only GCU 516, SOS 560 or PUP 560
PUP	**561**	Urban Design Studio	Current urban form and urban landscape design problems within the Phoenix-centered region.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4.		
PUP	**562**	Advanced Theory of Urban Design	Study of urban design practice and underlying social, political, and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**563**	The Politics of Urban Space and Design	Advanced seminar critically examines major intellectual traditions investigating urban form, the production of urban space, and socio-spatial practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**565**	Smart Growth and New Urbanism	History, theory, principles, and practices of smart growth and new urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	**575**	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**576**	GIS Studio	GIS as a tool to address large, multifaceted planning problems.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate Liberal Arts student
PUP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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PUP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmntl Planning MUEP student
PUP	**585**	International Field Studies in Planning		N	FLD	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Must be graduate student. Students who have credit for PUP 485, may not enroll in PUP 585
PUP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate students only
PUP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**622**	Planning Methods II: Quantitative Planning Analysis	Methods and models used as the basic quantitative techniques of urban, regional, and environmental planning and policy analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: PUP 524 with C or better
PUP	**642**	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	**644**	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3.		
PUP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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PUP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1.		
QBA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**221**	Statistical Analysis	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3.	CS	Pre-requisites: Must have completed one of the following courses with a grade of D or greater or be currently enrolled: MAT 119, MAT 211 or MAT 271
QBA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Must be an Honors student
QBA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		
QBA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	**502**	Managerial Decision Analysis	Fundamentals of qualitative and quantitative analysis to aid management decision making in a competitive and uncertain environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA student
QBA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		

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QBA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
QBA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1.		
QBA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	**505**	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**507**	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**510**	Teaching Writing in the Elementary Classroom	Develops rationale, theory, and related practices for teaching writing in K-8 classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**512**	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**521**	Assisting the Struggling Adolescent Reader	Familiarizes teachers with literacy interests, practices, methods, strategies, and resources to develop and enhance students' enjoyment of learning with texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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RDG	**522**	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis).	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**525**	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**530**	Research Issues in Literacy	For graduate students interested in research on major issues related to literacy instruction. Seminar activities include reviewing quantitative and qualitative methods and analyzing literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**533**	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**534**	Literacy in Science and Math	Strategies for improving literacy and learning for middle school students in math and science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**550**	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**556**	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading/literacy assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 550 or 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**557**	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**563**	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**565**	Literature for Latina and Latino Children and Adolescents	Selects, analyzes, and utilizes literature for Hispanic and Spanish-speaking children and adolescents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**581**	Literature-Based Reading Programs		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**596**	Gender, Culture, and Literacies	Influence of gender and culture on written, oral, and post-typographical texts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

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RDG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**630**	Research in Literacy	For advanced graduate students interested in applied research problems, literature of literacy instruction, and major issues related to literacy research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**634**	Technoliteracies	Online course explores the nature of digital communications and expanding definitions of what counts as text and as literate expression.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be Post Bac, Non Degree Graduate or Degree Graduate. Credit is allowed for only EDT 634 or RDG 634
RDG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
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RDG	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

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RDG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	**531**	Language and Literacy I	Instructional strategies for teaching reading using systematic, research-based phonics to aid decoding, vocabulary, comprehension development, writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**532**	Language and Literacy II	Applies literacy strategies including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, and extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
RDG	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RDG	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**301**	Literacy and Instruction in the Content Areas	Required course for all Secondary Education candidates. Introduces theory and instructional strategies for learning from text across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**322**	Language Literacy 1 in Elementary Schools	Instructional strategies for teaching reading using systematic research-based phonics to aid decoding; vocabulary; and comprehension development; writing, speaking, and listening skills.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**323**	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**334**	Children'sLiterature and Elementary School Curriculum	Selecting and using children's literature in various curriculum areas in elementary school classrooms with diverse student populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	HU	
RDG	**413**	Language Literacy 2 in Elementary Schools	Applies literacy strategies, including instruction and diagnostic assessment, literacy lessons with adaptations for diverse learners, extended classroom experiences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**414**	Teaching Reading and Decoding	Emphasizes teaching reading as part of an integrated classroom curriculum. Includes strategies and skills for teaching decoding (phonics), vocabulary, comprehension, study skills, and content area reading.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**440**	Computer Gaming, Learning, and Literacy	Examines the principles of learning underlying well-designed video and computer games. Addresses the literacies involved in such games.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**481**	Reading Practicum		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
RDG	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
RDG	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
RDG	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
RDG	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
RDG	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
RE	**302**	Life and Letters of Paul		Y	LEC	Y	CNV	Liberal Arts and Sciences	Department of Supply Chain Management	3.		
RE	**584**	Internship		Y	LEC	Y	CNV	W.P. Carey School of Business	Department of Supply Chain Management	3.		
REA	**300**	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.

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REA	**331**	Real Estate Finance	Legal, market, and institutional factors related to financing proposed and existing properties. Emphasizes current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student. In addition to individual course prerequisites, nonbusiness students must have at least a 2.50 ASU cumulative GPA, a 2.50 ASU business GPA, and 56 earned semester hours to register for any upper-division business course unless otherwise noted.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		
REA	**380**	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	**401**	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**441**	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**456**	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3.		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA and 2.5 ASU business GPA, OR Non-degree OR Graduate student.
REA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P.Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
REA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
REA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
REC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**502**	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**530**	Recreation and Tourism Service Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**552**	Critical Issues in Recreation and Tourism	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		

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REC	**555**	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**569**	Advanced Tourism Studies	Advanced survey of tourism literature with an emphasis on relevant theories, concepts, and current research.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**570**	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**579**	Tourism Analysis	Examines theories and methods that govern tourist behavior and their relevance to destination development, operations, and management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
REC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		
REC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
REC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
REC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Community Resources and Development	1-12		
REC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-12		
REC	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Public Programs	School of Community Resources and Development	1.		
RED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		

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RED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
RED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		
RED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**111**	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only HST 111 or REL 111
REL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites:Total Earned Hours must be less than or equal to 75 Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**205**	Living and Dying	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world. Lecture, discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**210**	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**225**	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**230**	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	Credit is allowed for only HST, JST or REL 230
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & G	
REL	**260**	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	

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REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**301**	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**307**	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, or 105, or 108 with a grade of C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**313**	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	**314**	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 390, PHI 390 or REL 314
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**317**	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**318**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(HU or SB) & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**323**	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: ENG 102 or 105 or 108 with a C or better; 24 or more hours
REL	**324**	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**326**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	
REL	**330**	Native American Religious Traditions	Presents world views and religious thought through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**331**	History of Native American Religious Traditions	Role of religion in Native American history, including missionization; religious adaptation; and prophetic, messianic, and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**332**	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**343**	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**344**	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**346**	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

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REL	**350**	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**351**	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & G	
REL	**353**	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**354**	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	Pre-requisites:ENG 102, or 105, or 108 with a grade of C or better or currently enrolled
REL	**355**	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**356**	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with a C or better or currently enrolled
REL	**357**	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L & G	Pre-requisties:ENG 102, (or 105, or 108) with a grade of C or better
REL	**362**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, SGS 366, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History) or REL 362
REL	**363**	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: AFS 200 or minimum 45 hours; Credit is allowed for only AFS 373 or REL 363
REL	**365**	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**366**	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H & G	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**372**	formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**373**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	(L or HU) & H	
REL	**375**	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**376**	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	**377**	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**379**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	

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REL	**380**	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**382**	Religion, Magic, and Science	Relationship and conflict among religion, magic, and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	L or HU	
REL	**383**	Origins, Evolution, and Creation	Examines scientific, mythic, and religious ideas relating to origins (particularly human). Place of antievolutionism and scientific creationism in American culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**384**	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105, or ENG 108 with C or better
REL	**385**	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**386**	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU or SB	
REL	**388**	Religion, Ethics, and International Politics	Explores the religious and ethical dimensions of international politics by examining historical and contemporary ideas, movements, issues, and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**391**	Historical Perspectives on Philosophy and Religion	Comprehensive investigation of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or ENG 108 with C or better; Credit is allowed for only PHI 391 or REL 391
REL	**393**	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**395**	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with C or better. Students who have credit for PGS 395, may not enroll in REL 395
REL	**396**	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites:Must have a C or better in ENG 102, or ENG 105, or ENG 108, or currently enrolled
REL	**405**	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Religious Studies undergraduate student
REL	**410**	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**420**	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU	
REL	**427**	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**430**	Mesoamerican Shamanic Cosmographies	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**460**	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & G	
REL	**461**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only AFS 480, SGS 442 or REL 461
REL	**470**	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	

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REL	**471**	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	HU & H	
REL	**480**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.	G	
REL	**482**	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	**483**	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**486**	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	**487**	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		
REL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Must be an Honors student
REL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Must be an Honors student
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**501**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
REL	**502**	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**581**	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		

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REL	**582**	Foundations of Ethics II	Studies contemporary moral philosophy and social ethics and their applications to the pressing issues of the present age. Considers some of these sources for ethical thinking in the twentieth century and their relation to classic traditions: existential ethics, critical theory, race and gender theory, postmodern ethics, and post-Holocaust ethics. Examines the possibility of an ethic suitable for the global coexistence among secular, spiritual, and postsecular perspectives. In the applied, activity-portion of the course, students investigate real-life ethical issues with a global significance and examine them from several contemporary perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Credit is allowed for only AEP 502, PHI 502 or REL 582
REL	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**585**	Ethical and Spiritual Issues in Pastoral Care	Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to the integration of the body-mind-spirit, this course introduces basic concepts and practices of the pastoral care ethics and spirituality. Focuses on the irreducible relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. The theoretical part of the course is inter-faith in approach, holistic in scope, and specialized in content; in the applied, activity-portion of the seminar, students investigate real-life issues in care ethics and spirituality and examine them from several perspectives studied during the semester.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Students with credit for PHI 550 or REL 585 may not enroll in AEP 550
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
REL	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**603**	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: Phd or Masters student in Religious Studies

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REL	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	**720**	Approaches to North American Religious History	Traces narratives and approaches to imagine and reimagine the "plot" of American religious history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3.		Pre-requisites: PhD in Religious Studies student
REL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1.		
REL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**300**	Research, Writing, and Thinking in Religion and Applied Ethics	Theoretical and methodological tools to study world religions' beliefs, practices, and communities and their intersections with ethical perspectives on problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
REL	**310**	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(L or HU) & C & H	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater or be currently enrolled.
REL	**345**	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**401**	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	**490**	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	THE	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
REL	**492**	Honors Directed Study		Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**493**	Honors Thesis		Y	THE	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
REL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
REL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
REL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
REL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
REL	**100**	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Credit is allowed for only REL 100 or 200.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	Pre-requisite:students may not enroll in REL 100 if they have received a D or better in REL 200
REL	**200**	The Study of Religious Traditions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Credit is allowed for only REL 200 or 100.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & G	Pre-requisites: Students may not enroll in REL 200 if they have received a D or better in REL 100
REL	**201**	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**202**	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C	
REL	**203**	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & H	
REL	**207**	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(HU or SB) & G	
REL	**270**	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**315**	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**320**	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & C & H	
REL	**321**	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & C & H	
REL	**369**	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		

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REL	**371**	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	
REL	**374**	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	(L or HU) & H	
REL	**381**	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or HU	
REL	**390**	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU & G	
REL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
REL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		Pre-requisite: Minimum CUM GPA of 2.00
ROM	**101**	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**201**	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
ROM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**313**	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 201
ROM	**314**	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: ROM 313
ROM	**411**	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	**412**	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RTM	**451**	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
RTM	**487**	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: REC 486 or RTM 486 with C or better
RUS	**101**	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		
RUS	**102**	Elementary Russian	See RUS 101. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RUS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**201**	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**202**	Intermediate Russian	See RUS 201. fee	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	
RUS	**211**	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**212**	Basic Russian Conversation	See RUS 211. fee	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	
RUS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**311**	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**312**	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 202 with C or better
RUS	**321**	Foundations of Russian Literature	Literary movements, prose, poetry, and drama from early Kievan writings to 19th-century works of Pushkin, Lermontov, Gogol. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H	
RUS	**322**	Great Russian Writers of the 19th Century	Surveys the great age of prerevolutionary Russian prose, including works of Gogol, Turgenev, Dostoevski, Tolstoy, and Chekhov. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**323**	Modern Russian Literature and the Soviet Legacy	See also SLC 323. 20th-century Russian writers: their prose, poetry, drama; problems of the writer in Soviet and post-Soviet society. Does not satisfy the CLAS language requirement for the BA degree. Open to nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
RUS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**411**	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**412**	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: RUS 312 with C or better
RUS	**417**	Applied Russian Phonetics	General improvement in the student's language skills through aural/oral training in Russian phonology and an analysis of Russian orthography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	2.		Pre-requisites: RUS 102 with C or better
RUS	**420**	Russian Poetry	Development of Russian poetry from its beginnings to the present, including both native and emigre poets. Topics in criticism and the study of poetics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**421**	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**423**	Dostoyevsky	Dostoyevsky's major works of fiction, including Crime and Punishment and Brothers Karamazov. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**424**	Tolstoy	Tolstoy's major works, including War and Peace and Anna Karenina. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**425**	Chekhov	Chekhov's major works, representative short stories and major plays, including The Cherry Orchard and Three Sisters. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	
RUS	**430**	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L or HU	Pre-requisites: RUS 312 with C or better
RUS	**441**	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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RUS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
RUS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
RUS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	**495**	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
RUS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	**494**	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	**496**	Study Abroad	Courses with the prefix SAO numbered 496 and 596 are reserved for Study Abroad Office study abroad and exchange programs. This is a placeholder course. Students must register for the number of credits equivalent to full-time study here at ASU. For most programs, participating undergraduate students register for 12 semester hours and graduate students register for 9 semester hours. Students participating in an SAO Study Abroad Program must register for the subtopic SAO: Study Abroad Program; participants in an SAO Exchange Program will register for the subtopic SAO: Exchange Program. Following completion of the student's international program, this course will be dropped and will be replaced by the ASU equivalencies of those courses completed on the program. In this way, actual credits and grades earned for particular courses completed on SAO programs will be recorded at ASU.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**596**	Study Abroad	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	**598**	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**200**	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**300**	Interdisciplinary Approaches to Social and Behavioral Sciences	Interdisciplinary approach to the study of social life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**301**	Cultural Diversity	Socially structured differences in historical and cross-cultural perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	(L or SB) & C	
SBS	**302**	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**303**	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**304**	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	
SBS	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SBS	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**351**	Population Geography	Demographic patterns. Spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	Pre-requisites: must have completed MAT 117,or119, or142, or 170,or 210 with a grade of C or greater; or be currenlty enrolled in one of these
SBS	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**404**	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	CS	Pre-requisites: must have completed SBS 303 and SBS 304 with a grade of C or greater.
SBS	**410**	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**430**	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**440**	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**447**	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SBS	**450**	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SBS	**460**	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SBS	**461**	Program Evaluation and Policy Research	Examines design, data collection/analysis, and political/ethical issues in planning and evaluating social programs and policies in community organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		Pre-requisites: AJS 302, COM 308, PSY 290, SBS 302 or SBS 303
SBS	**480**	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SBS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SBS	**490**	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		

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SBS	**491**	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SBS	**492**	Honors Directed Study		N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SBS	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SBS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SBS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SBS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SBS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SCM	**300**	Global Supply Operations	Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W. P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA; ACC 241 or ACC 271, CIS 105 or CIS 220 or CIS 236, and ECN 221 with a grade of C or greater.
SCM	**301**	Supply Chain Management	Examines the purchasing, materials, and logistics management areas. Presents techniques for acquiring, storing, processing, and moving material inventory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		
SCM	**303**	Honors Global Supply Operations	Explores the principles, concepts, and tools of supply chain management, with emphasis on how these are applied in the business world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: Must be a W. P. Carey School of Business Honors student; ACC 241 or ACC 242 or ACC 271, and ECN 221 or ECN 231 with a grade of C or better
SCM	**345**	Logistics Management	Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisite: W.P. Carey Supply Chain Management BS student; Co- or Pre-requisite: SCM 300 or 303 with a grade of C or better or be currently enrolled or co-enrolled.
SCM	**355**	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	**415**	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites:SCM 300 or SCM 303 with a grade of C or better
SCM	**432**	Planning and Control Systems for Supply Chain Management	Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management. fee	N	LAB	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 345 with C or better; Pre/Co-requisite: SCM 355
SCM	**440**	Quality Management/Measurement	Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	**455**	Research and Negotiation	Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 355 with a grade of C or greater
SCM	**463**	Global Supply Chain Management	Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey BS or BA student; Must have completed SCM 300 with a grade of C or greater.
SCM	**479**	Supply Chain Strategy	Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management. fee	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 432 with a grade of C or greater
SCM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Pre-requisites: Must be an Honors student
SCM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite: SCM 300 or SCM 303
SCM	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		

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SCM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	**502**	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	**511**	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**515**	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**520**	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3.		Pre-requisites: SCM 502 with C or better
SCM	**521**	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**532**	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**541**	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**551**	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**581**	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**587**	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	**588**	Strategic Project Management	Overview of strategic project management processes, project planning and control, project portfolio management, resource allocation, management of strategic project partners.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-3		
SCM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1.		
SCM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SCN	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SCN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SCN	**480**	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		
SCN	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
SCN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SCN	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		
SCN	**530**	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**502**	Equity in Mathematics and Science Education	Introduces equity issues in science and mathematics as they relate to gender, social class, and ethnicity. Examines current research in these areas.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**522**	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate student
SED	**523**	Middle School Curriculum and Organization	Overview of the organization, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**527**	Performance Assessment: Classroom Applications	Develops knowledge and skills of evaluating and assessing learning in middle and secondary schools. Introduces methods to assess cognitive, metacognitive, and affective domains.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**528**	Organizing and Managing the Middle/Secondary Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**529**	Dynamics of Effective Teaching	Explores and applies new research regarding learning, motivation, and retention. Has immediate application and results for classroom teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**530**	Introduction to Middle School Concept, Philosophy, and Curriculum	Overview of the concept, curriculum, and philosophy of the U.S. public school system with emphasis on the middle school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**533**	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must be a graduate student
SED	**544**	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**548**	Teaching Geometry 5-8	Practical ideas and activities for teaching informal geometry grades 5-8, based on research on how students learn geometry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**577**	Issues and Trends in Secondary Education	Analyzes lay and professional reports; problems and issues in American secondary education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**722**	Improvement of Instruction in the Secondary School	Evaluates the research; issues and theories related to the improvement of instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Must have earned a C or better in SED 533
SED	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SED	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	**501**	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**520**	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**547**	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**560**	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**561**	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**564**	Middle-School Curriculum and Organization	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**576**	Field Experience	Applies course content in secondary and middle school science and mathematics classrooms: observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	0-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**578**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only. fee	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**579**	Apprentice Teaching in Secondary Education	Apprentice teaching in secondary school classrooms. Must be taken four times for a total of 9 semester hours. Lab, field experience. Fee.	N	FLD	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	2-3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SED	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
SED	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**321**	Critical Issues in Secondary Education	Examines perspectives of critical issues in contemporary education and encourages students to think critically and to develop their own viewpoints.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**322**	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**396**	Field Experience I		N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**397**	Field Experience II	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment. fee	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	0-1		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**464**	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**478**	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program.

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SED	**480**	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**481**	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**482**	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SED	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SED	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SED	**496**	Field Experience III	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisites: Admission to Professional Teacher Preparation Program.
SED	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SEM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-3		
SEM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-12		
SEM	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-4		
SEM	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-12		
SEM	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		

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SEM	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Center for Solid State Science	1-12		
SEM	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Center for Solid State Science	1.		
SEM	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Graduate College	Center for Solid State Science	1-15		Pre-requisites: Science & Engr of Materials PhD students
SES	**100**	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	CS	
SES	**101**	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.	SQ	
SES	**102**	Earth, Solar System, and Universe II	Continuation of SES 101. Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: SES 101 with C or better; Pre/Co-requisite MAT 170 (with D or better if completed)
SES	**103**	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 101 and SES 103 must be taken together to secure SQ General Studies credit. Fee.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.	SQ	
SES	**104**	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing. fee	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**111**	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1.		
SES	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	**210**	Engineering Systems and Experimental Design	Scientific and engineering design process. Defining scientific problems, generating and evaluating engineering solutions. Computer modeling, technical writing and teaming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: CHM 113 or PHY 121 with D or better or currently enrolled; ENG 101, ENG 105 or ENG 107 with D or better or currently enrolled; MAT 265 or MAT 270 with D or better or currently enrolled
SES	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**311**	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: MAT 265 or MAT 270; PHY 121 or CHM 113 or BIO 188
SES	**330**	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4.		Pre-requisites; PHY 131; PHY132; SES 394 Topic: Concepts of Electrical & Mechanical Engineering Design, with C or better
SES	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	**405**	Exploration Systems Engineering	Provides an introduction to systems engineering with an emphasis on the following topics: the systems engineering process, requirements, design fundamentals, subsystem fundamentals, trade studies, integration, technical reviews, case studies and ethics. Prepares the student for the capstone spacecraft/mission design course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: SES 330; SES 394 topic: Concepts of Electrical & Mechanical Engineering Design with C or better Repeat for credit: No
SES	**410**	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 311

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SES	**411**	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3.		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SES	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
SET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
SET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		
SGS	**101**	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	
SGS	**102**	Thinking Globally: Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**103**	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G	
SGS	**111**	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**240**	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(HU or SB) & G	
SGS	**294**	Special Topics		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**301**	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better
SGS	**303**	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	**304**	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 101 and ENG 102 with a C or better
SGS	**305**	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	L	Pre-requisites:SGS 101 and SGS 304 with C or better
SGS	**310**	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites:SGS 101 or SGS 301 and SGS 103 or SGS 303 with C or better
SGS	**311**	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**320**	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102 with C or better
SGS	**330**	Globalization and the Environment: Problems and Solutions	Assesses the impact of globalization on the earth's environment. Examines such issues as biodiversity loss to pollution to urbanization to climate change, among others, and assess how globalization has driven, impacted or improved these environmental problems. Emphasis on understanding the social, political and economic factors that have contributed to global environmental change and the degree to which globalization processes are something `new', as well as on examining the ability of communities, nations and transnational institutions to manage these global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Pre-requisites: ENG 102, 105 or 108 with C or better; 30 completed hours

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	**341**	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**343**	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	HU & G	
SGS	**344**	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**366**	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		Prerequisites: AFS 200 or minimum 45 earned hours; Credit is allowed for only AFS 372, AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History), REL 362 or SGS 366
SGS	**381**	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	SB & G & H	
SGS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	**441**	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	G	
SGS	**442**	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**454**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.	(L or SB) & G	May not enroll in SGS 454, if received credit for WST 447, or TCL 447
SGS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Pre-requisites: Must be an Honors student
SGS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Pre-requisites: Must be an Honors student
SGS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3.		
SGS	**497**	Honors Colloquium		N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		
SGS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		
SHS	**102**	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 101 with C or better; taken within the past two years
SHS	**105**	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SHS	**201**	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 102 with C or better and taken within the past two years
SHS	**202**	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: SHS 201 with C or better and taken within the past two years
SHS	**250**	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**310**	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY 101
SHS	**311**	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: BIO 201; PHY101; SHS 105
SHS	**350**	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**367**	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	
SHS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**375**	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310; SHS 311
SHS	**376**	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**401**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 401 or 501.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311 with D or better; Students who have credit for SHS 501, may not enroll in SHS 401
SHS	**402**	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 250
SHS	**465**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.	SB	Pre-requisites: Credit is allowed for only SSH 465 or 565
SHS	**470**	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**473**	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**483**	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**485**	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 310
SHS	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		Pre-requisites: Must be an Honors student
SHS	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6	L	Pre-requisites: Must be an Honors student
SHS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**496**	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 311, 375 and 401 with "D" or better; Students who have credit for SHS 596, may not enroll in SHS 496
SHS	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-7		
SHS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-3		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		Pre-requisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**501**	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function. Credit is allowed for only SHS 501 or 401.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 401, may not enroll in SHS 501. SHS 311 with C or better
SHS	**502**	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisite: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**504**	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**505**	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**508**	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**510**	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**511**	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**512**	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**513**	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**515**	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**516**	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**517**	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**518**	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**519**	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**520**	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	4.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**521**	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2.		
SHS	**522**	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Speech and Hearing Science graduate student
SHS	**523**	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: SHS 502 and SHS 513. SHS majors only
SHS	**524**	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	2-3		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**525**	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**552**	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology or PHD Speech and Hearing Science student
SHS	**555**	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**565**	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Students who have credit for SHS 465, may not enroll in SHS 565
SHS	**567**	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		

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SHS	**570**	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**571**	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**572**	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**573**	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**574**	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**575**	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**576**	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**577**	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**579**	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**580**	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**581**	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**582**	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**584**	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-6		
SHS	**585**	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**587**	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	**588**	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		
SHS	**589**	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**596**	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Credit is allowed for only SHS 496 or 596
SHS	**597**	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	3.		Pre-requisites: Must be a graduate student

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-4		
SHS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-12		
SHS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Speech and Hearing Science	1.		
SHS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Speech and Hearing Science	1-15		
SHS	**101**	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		
SLC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SLC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**201**	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU or SB	
SLC	**202**	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	DIS	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 102, 105, or 108 with a C or better
SLC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**323**	Survey of Literature of the Soviet Era in Translation	Surveys main literary movements, prominent authors, most significant works of prose, poetry, and drama of the Soviet period, 1917-1991.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**385**	Career Development for Language Majors	Theoretical and practical aspects of career planning and development; research focus on language-related careers.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 101 or ENG 107 with D or better; ENG 102 or ENG 108 with D or better or currently enrolled
SLC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**400**	Linguistics	Introduces the analysis of language and its use in social contexts. Topics: morphology, phonology, pragmatics, semantics, syntax, and variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	Pre-requisite: Junior academic level
SLC	**401**	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**415**	Bilingualism and Languages in Contact	Analyzes linguistic aspects of bilingualism, e.g., pidgins and creoles, code-switching, and other contact phenomena; simultaneous/sequential bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better or currently enrolled

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SLC	**420**	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & G	
SLC	**421**	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & G	
SLC	**440**	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
SLC	**450**	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200; ENG 200-level literature course, or FMS 100; FMS 200 . Students who have credit for ENG 447 or FMS 442 may not enroll in SLC 450
SLC	**461**	Feminist Political Writing in Contemporary Europe	Examines the discourse of gender-politics in Central Eastern Europe before and after Soviet hegemony.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**464**	Politics of Drama in 20th-Century Europe	Interdisciplinary examination of European drama before and after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**472**	Literature and Politics in Pre- and Post-Communist Europe	Interdisciplinary examination of the cultures of Eastern Europe from WWI to the present.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: ENG 200 with D or better or currently enrolled; ENG 101 and 102 (or 105) OR ENG 107 and 108 with C or better
SLC	**476**	Literature and Film in 20th-Century Eastern Europe	Evaluates literary texts and films as a massive propaganda machine of the totalitarian state.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**479**	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**480**	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 479 with a C or better
SLC	**481**	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**482**	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:SLC 401 completed with D or better or currently enrolled
SLC	**483**	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SLC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**492**	Honors Directed Study	Research and preparation for HON 493.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Honors students only
SLC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		Pre-requisites: Must have completed at least 56 hours
SLC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	**515**	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SLC 400 with D or better
SLC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SLC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SLC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SLC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**304**	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	CS	
SLV	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**440**	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	SB	
SLV	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SLV	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SLV	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

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SLV	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SMC	**520**	Methods and Tools in Applied Cognitive Science	Provides a hands-on approach to understanding and using advanced methodologies commonly implemented in the field of cognitive science.	N	SEM	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SMC	**521**	Methods and Tools in Simulation and Modeling	Introduces specific methods and tools used in the field of modeling and simulation, with computer-based experience through both writing and using simulation software.	N	SEM	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SMC	**541**	Foundations of Simulation and Modeling	Introduces a wide variety of methodologies utilized by and applications of the broad field of simulation and modeling.	N	SEM	N	OPT	College of Tech & Innovation	Faculty of Applied Psychology	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**220**	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**264**	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	Pre-requisite: ENG 101 or ENG 105 or ENG 107 or ENG 111 with C or better
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**312**	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: minimum 24 hours; SOC 101, PGS 101, FAS 101 or FAS 330 with C or better; Students who have credit for CDE 312 may not enroll in SOC 312
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**321**	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**331**	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**333**	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**334**	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G & H	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**363**	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	

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SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: ENG 102 (or ENG 105/108) with C or better; ASB 100 (or 102), Soc 101, SOS 110, or SSH 100 with C or better. Students with credit for ASB 370, SOS 370, or SSH 370 may not enroll in SOC 370
SOC	**375**	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	(HU or SB) & C	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	CS	
SOC	**391**	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Prerequisites: SOC 101 (or SOC 301 or CDE 232) and SOC 390. Credit is allowed for only FAS 361 or SOC 391
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**415**	The Family	Family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & H	
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**424**	Women and Health	Women as healthcare workers and issues of health, illness, and healthcare for women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**427**	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**433**	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**435**	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	DIS	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	L or SB	Pre-requisites: 30 earned hours; SOC 101 or PGS 101 or FAS 101 or FAS 331 with C or better; Students who have credit for FAS 435, may not enroll in SOC 435
SOC	**446**	Sociology of Crime	Process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**448**	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**451**	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & G	
SOC	**474**	African Americans in Modern Society	Social and cultural heritage of black Americans; achievements and current trends.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB & C	
SOC	**478**	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: ASB 102 or SOC 101 with C or better; 56 hours or more; Students who have credit for SOC 478 or ASB 478 may not enroll in TCL 478
SOC	**483**	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		
SOC	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-6		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-7		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-3		
SOC	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**503**	Academic Professional Development	Becoming and working as an academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**504**	Sociology as a Profession II	Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**505**	Applied Regression Analysis	Multiple linear regression topics relevant to sociological data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**507**	Social Statistics IIA: Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in sociology. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**508**	Social Statistics IIB: Structural Equation Analysis	Structural equation models using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**509**	Social Statistics IIC: Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**512**	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**515**	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**516**	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**519**	Graduate Medical Sociology	Current developments in medical sociology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**523**	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**533**	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		
SOC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**585**	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	3.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-4		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		
SOC	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		

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SOC	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social and Family Dynamics	1-12		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social and Family Dynamics	1.		Pre-requisites: Must be a Graduate student (Non-degree or degree seeking)
SOC	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of Social and Family Dynamics	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**210**	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**270**	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**301**	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Students may not sign up for SOC 301 who have received a D or better in SOC 101.
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**324**	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**328**	Migration	Introduces the definition and analysis of migration in all forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**339**	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisite: must have completed ENG 101 or 105 with a grade of C or greater.
SOC	**340**	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**342**	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & C	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G & H	
SOC	**353**	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the particular perspectives of archaeology, bioarchaeology, and cultural anthropology. Uses a comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3-4	(HU or SB) & G	
SOC	**356**	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	DIS	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**360**	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**364**	Popular Culture	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**365**	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	

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SOC	**366**	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**374**	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**389**	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**400**	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**418**	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & H	
SOC	**419**	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	G	
SOC	**426**	Social Inequality	Examines stability and change in social inequality based on age, class, ethnicity, gender, and race.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	
SOC	**443**	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**445**	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**456**	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOC	**457**	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB & G	
SOC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**486**	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.	SB	Pre-requisites: Must have taken SOC 101 or 301 with a grade of D or greater; or be currently enrolled in SOC 101 or 301
SOC	**492**	Honors Directed Study		N	THE	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6		Pre-requisites: Must be an Honors student
SOC	**493**	Honors Thesis		N	LEC	N	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-6	L	Pre-requisites: Must be an Honors student
SOC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-7		
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-3		
SOC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		
SOC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	1-4		
SOC	**101**	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Students may not sign up for SOC 101 who have received a D or better in SOC 301.
SOC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**241**	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**315**	Courtship and Marriage	Overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**332**	The Modern City	Growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
SOC	**352**	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G & H	
SOC	**390**	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	
SOC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SOC	**420**	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L or SB	
SOC	**421**	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
SOC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Social and Behavioral Sciences - W	3.		
SOS	**100**	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	**110**	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**111**	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	(HU or SB) & G	
SOS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	**300**	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Sustainability minor. SOS 100 with C or better; 6 hours from two Sustainability themes
SOS	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**320**	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	L or SB	Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**321**	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**322**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	**323**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**324**	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better
SOS	**325**	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:Completed SOS 110, and SOS 111 (or PUP 190), with a grade of C or better,
SOS	**326**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**327**	Sustainable Food and Farms	Food systems and sustainability. Theories of food security, rural livelihood sustainability, and food sovereignty. Critically examines the social, ecological, economic, and institutional dimensions of the many sustainability challenges associated food system activities (production, processing, distribution, consumption, waste). Students develop a food system framework and apply knowledge to an assessment of the sustainability of one aspect of the local food system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: SOS 110 and SOS 111 (or PUP 190) with C or better
SOS	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.	SB	Pre-requisites: ENG 102 (or ENG 105/108) with C or better; ASB 100 (or 102), Soc 101, SOS 110, or SSH 100 with C or better. Students with credit for SOC 370, ASB 370, or SSH 370 may not enroll in SOS 370
SOS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	School of Sustainability	School of Sustainability	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SSH 414, may not enroll in SOS 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SOS	**424**	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4.		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Students who have credit in BIO 424 or ASM 424, may not enroll in SOS 424
SOS	**430**	Sustainable Economic Development and Social Transformation	A clustered learning network on the application of sustainability principles to the evaluation of economic development strategies at the national, regional, and local levels, using case studies. May be repeated once for credit.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**431**	Resilience and Sustainability	A clustered learning network on the application of resilience analysis to the evaluation and management of the sustainability of coupled social-ecological systems using case studies. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**433**	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**465**	Smart Growth and New Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: PUP 301 with a C or better. Credit for PUP 565, SOS 465, or PUP 465 only; or Sustainability majors who have completed SOS 110 and 111 with a C or better. 45 hours earned
SOS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**492**	Honors Directed Study		Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		
SOS	**493**	Honors Thesis		N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Pre-requisites: Must be an Honors student
SOS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	**499**	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	**510**	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		

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SOS	**511**	Methodology of Sustainability Research and Problem Solving	Provides a sense of when, where, and how quantitative methods are used in studying questions related to sustainability; a road map for furthering quantitative skill sets; and opportunities to refresh and build some basic mathematical skills from selected topics in differential and integral calculus, linear algebra, and probability and statistics that will be required for further study.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**512**	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**513**	Science for Sustainability	Carbon cycle, nutrient cycles, carbon and nutrients in the oceans, climate change, oxygen and ozone, solid waste pollution, urban air pollution.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**514**	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**515**	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**516**	Science, Technology, and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 516 if you have credit in GLG 547, or PAF 547, or BIO 515
SOS	**530**	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale. Credit is allowed for only SOS 530 or SOS 322.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**532**	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites:May not enroll in SOS 532, if credit received for ASB 533
SOS	**533**	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**534**	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**535**	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**536**	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Studentso choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		

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SOS	**540**	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to enable them to understand and critique empirical research papers and to conduct their own basic quantitative analysis. Exposes students to applications of statistical methods in the literature to foster an understanding for how statistical and econometric tools are utilized in the research community and to develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations, and command of statistical tools that constitute quality empirical research. Class sessions primarily focus on the development of the necessary theoretical "toolbox"; practical skills in the use of a statistical software package and in interpreting its output are fostered through problem sets.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**550**	Introduction to Sustainability and Organizational Strategies	Focuses on organizational strategies for technology companies competing in a global environment. Strategic and tactical decision implications of a life cycle value proposition; modeling and analysis for strategic decisions about product/service bundles and delivery mechanisms; innovation; technology, including the linkages to the firm strategy and empirical evidence; supply, demand, and value chain; research of laws, guidelines and international agreements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**551**	Water Policy and Management	Covers water policy and management focused on Arizona. Useful to anyone looking for a general background on water issues in Arizona or considering a career in water resources and environmental engineering, planning, or public policy. Divided into three major sections: the history of water resources development and hydrology of Arizona; water management in Arizona; and an examination of current issues and controversies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		You may not enroll in SOS 551 if you have credit in CEE 544
SOS	**552**	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		Pre-requisites: Students who have credit for CEE 581, may not enroll for SOS 552
SOS	**559**	Sustainable Technology and Management Capstone	Provides opportunity to demonstrate comprehension of the fundamental aspects that have been introduced in the classroom and the synthesis of these fundamental aspects into a demonstrable project that can be presented and defended.	N	STO	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**560**	Principles of Urbanism	Organizing core course for PhD concentration in Urbanism. Gives overview of various perspectives on urbanism to present basic tenets, disciplinary threads, and body of scholarship associated with urbanism.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**579**	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3.		
SOS	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		

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SOS	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1.		
SOS	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SP	**431**	Prose of Golden Age		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.		Credit is allowed for only SPA101,102111,201,202,203,204,311,312, 313,314, 315, 316,325, or 412
SPA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Must be a freshmanwith 25 or less total earned hours
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 201 or SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 202 or SPA 204, 311-316, 325 or 412
SPA	**203**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 203 or SPA 201,202,204,311,312,313,314,315,316,325,412
SPA	**204**	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4.	G	Credit is allowed for only SPA 204 or SPA 202, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**312**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	May not enroll in SPA 313 if received a D or better in SPA 314,315, 316,325,412
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412
SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412

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SPA	**319**	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisite: SPA 314 or 316
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**400**	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre/co-requisite: SPA 413; Credit is allowed for only SPA 400 or SPA 539
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites: SPA 314 or SPA 316 or SPA 413 with C or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	G	Pre-requisites:SPA 314, SPA 316, or SPA 412 with a C or better
SPA	**417**	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 412 or 413 with C or better
SPA	**418**	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 413 with C or better
SPA	**420**	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413 with D or better
SPA	**421**	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or SB) & C	Pre-requisites: SPA 412 with C or better
SPA	**422**	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 412
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L & G	Pre-requisite: SPA 325
SPA	**429**	Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuilxóchitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**431**	Prose of Golden Age		N	LEC	N	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**434**	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderón de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**435**	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**454**	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**456**	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**471**	Civilization of the Spanish Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(L or HU) & C	Pre-requisites: SPA 314 or 316
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**473**	Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	(HU or SB) & G	Pre-requisties: SPA 314 or 316
SPA	**474**	Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**485**	Mexican American Short Story	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.	L	Pre-requisite: SPA 325

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SPA	**486**	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**487**	Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisite: SPA 325
SPA	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Pre-requisites: Must be an Honors student
SPA	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Pre-requisites: Must be an Honors student
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**497**	Honors Colloquium		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	**500**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**534**	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**536**	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**537**	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**538**	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**539**	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: graduate student; students who have credit for SPA 400, may not enroll in SPA 539
SPA	**540**	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**541**	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**542**	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**543**	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**544**	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**545**	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**547**	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites: SPA 400 or SPA 539
SPA	**552**	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marín, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**555**	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**557**	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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SPA	**560**	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**561**	Golden Age Spanish Prose Fiction	Major figures and works of the 16th and 17th centuries, with emphasis on the picaresque novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**562**	Golden Age Spanish Poetry	Major figures and works of the 16th and 17th centuries, with emphasis on lyric poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**563**	Spanish Romanticism	Principal figures and works of Spanish romanticism, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**564**	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**565**	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**566**	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**567**	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**568**	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**569**	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**570**	Indigenous Literatures of Spanish America	Indigenous literary traditions, with emphasis on Nahuatl, Mayan, and Quechua literatures through readings in Spanish translations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**571**	Colonial Spanish American Literature	Major figures and works from conquest to independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**572**	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**573**	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**574**	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**575**	Contemporary Spanish American Novel	Principal novels of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**576**	Contemporary Spanish American Short Story	Principal short stories of the Nueva Narrativa Hispanoamericana, within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**577**	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**578**	Novel of the Mexican Revolution	Representative works and authors of this genre (Guzmán, Azuela, Urquizo, Muñoz, and Romero), including related or peripheral offshoots in indigenous novels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**581**	Latin American Popular Culture	Studies in selected topics of Latin American popular culture, with emphasis on appropriate academic models for the critical analysis of these materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**582**	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**585**	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlica, Suárez, Ulibarrí, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**586**	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**587**	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory an other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		

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SPA	**588**	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**589**	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**601**	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		
SPA	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	**791**	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SPA	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1.		
SPA	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	THE	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**102**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.		Students may not sign up for SPA 101, OR 102 if they have received a D or better in SPA 111.
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	Credit is allowed for only SPA 201 or SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	4.	G	Credit is allowed for only SPA 202 or SPA 204, 311-316, 325 or 412
SPA	**311**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**312**	Spanish Conversation	Designed primarily for nonmajors to promote vocabulary building and communicative expression in Spanish through discussions based on cultural readings.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: Must have completed SPA 202 with a grade of C or greater.
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**315**	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Credit is allowed for only SPA 313, 314, 315, 316, or 412
SPA	**316**	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisite: SPA 315; Credit is allowed for only SPA 314, 316, or 412
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**412**	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites: SPA 314 or SPA 316 or SPA 413 with C or better
SPA	**413**	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	G	Pre-requisites:SPA 314, SPA 316, or SPA 412 with a C or better
SPA	**425**	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**426**	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	Pre-requisite: SPA 325
SPA	**427**	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L	Pre-requisite: SPA 325
SPA	**428**	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	L & G	Pre-requisite: SPA 325
SPA	**464**	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	(HU or SB) & C	Pre-requisite: SPA 325
SPA	**472**	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H & G	Pre-requisties:SPA 314 or 316
SPA	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
SPA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
SPA	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
SPA	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
SPA	**101**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		Students who have taken SPA 102,111,201,202,203, 204, 311, 312, 313,314,315,316,325, OR 412 may not enroll in SPA 101
SPA	**102**	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		May not sign up for SPA 102 if received a D or better in SPA111,201-204;311-316,325,412
SPA	**111**	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.		Credit is allowed for only SPA101,102111,201,202,203,204,311,312, 313,314, 315, 316,325, or 412
SPA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**201**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	Credit is allowed for only SPA 201 or SPA 202, 203, 204, 311, 312 ,313 ,314 ,315, 316 ,325, or 412
SPA	**202**	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	School of Letters & Sciences	School of Letters and Sciences	4.	G	Credit is allowed for only SPA 202 or SPA 204, 311-316, 325 or 412
SPA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPA	**313**	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	
SPA	**314**	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	G	Students may not sign up for SPA 314 if they have received a C or better in SPA 412; Pre-requisite: SPA 313 or 315 with C grade or better
SPA	**325**	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
SPE	**316**	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3.		
SPE	**511**	The Exceptional Child	Educational needs of exceptional children and adults. Not recommended for students who have completed SPE 311.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**512**	Individuals with Mental Retardation	Etiology, diagnosis, and management of individuals with mental retardation. Current trends in prevention, programming, and teacher preparation. Not recommended for students who have completed SPE 312.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**514**	Bilingual/Multicultural Aspects of Special Education	Theories and issues related to the education of bilingual and culturally diverse exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**519**	Inclusion Methods: Science, Social Studies, and Mathematics	Instructional strategies used for delivery of science, social studies, and mathematics with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**521**	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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SPE	**524**	Effective Classroom Behavior Management	Organization and delivery of instruction including formative evaluation and techniques of academic behavior management for exceptional children. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**525**	Social Behavior Interventions	Analysis and intervention into social behavior problems of exceptional students. Focuses on strategies to change maladaptive social behavior. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**531**	Methods of Applied Behavior Analysis for Exceptional Populations	Behavior management approaches for classroom behavior of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**536**	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**537**	Instructional Management: Reading and Language Arts	Instructional strategies used for delivery of reading and language arts with exceptional children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**542**	Systems, Policies, and Program Practices for Infants and Young Children	Analyzes historical, political, social, and legal factors affecting services for infants and young children. Examines critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**548**	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**550**	Inclusion Practices in Science and Mathematics	Facilitates and expands knowledge in the practical application of strategies meeting diverse needs of learners in science and mathematics classrooms	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**551**	Teaching Young Children with Special Needs	Methods, materials, and curriculum for preschool and primary-aged children with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**553**	Developmental/Functional Assessment	Teacher-focused developmental/functional assessment of preschool and severely, physically, and multiply handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-Requisite: Graduate student
SPE	**561**	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**566**	Applied Behavior Analysis in Inclusive Settings	Definitions, characteristics, assumptions, and basic principles of behavioral analysis as applied to social skills in inclusion settings.	N	REC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**575**	Survey and Current Issues for Children with Special Needs	Mainstreaming, noncategorical, financing, legal diagnostic, labeling, legislative, and other critical and controversial issues related to the education of exceptional children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**577**	Inclusive Teaching and Learning	Develops successful learning environments for students using evidence-based instructional approaches, collaborative teaching models, and culturally responsive practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**582**	Research and Evaluation in Special Education	Introduces interpreting research. Specific research techniques with primary emphasis on classroom research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**585**	Creativity: Research and Development	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**586**	Advising the Gifted Child	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**587**	Controversies in Educating the Gifted	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**588**	The Gifted Child	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**589**	Methods in Teaching the Gifted	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only

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SPE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be graduatie student in Special Education
SPE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be a graduate student in Special Education
SPE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre-requisite: Graduate students only
SPE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be a graduate student in Special Education
SPE	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Must be a graduate student in Special Education
SPE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre-requisite: Must be a graduate student in Special Education
SPE	**702**	Conducting Research with Special Populations	Considers concepts and methodologies for conducting research with any aspect of special education, including gifted and multicultural.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisite: Graduate students only
SPE	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisite: Graduate students only
SPE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre-requisite: Must be Graduate(doctoral) student in Special Education

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SPE	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite:Must be a graduate student (doctoral) in Special Education
SPE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be a grad(doctoral) student in Special Education
SPE	**520**	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**532**	Systems, Policies, and Program Practices	Analyzes historical, political, social, and legal factors impacting special education services.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**533**	Issues and Foundations in Special Education	Foundational themes and issues in special education. Critical issues related to characteristics of students with mild emotional disturbance, behavior disorders, learning disabilities, mental retardation, orthopedic, and other health impairments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**534**	Assessment and Evaluation for Children with Special Needs	Discusses assessment practices related to student eligibility and program planning. Emphasizes authentic, individualized, interdisciplinary practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**535**	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**540**	Family Centered Practices	Issues associated with families and family systems. Effects of disabilities on families. Strategies for family support and empowerment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**541**	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**543**	Issues in the Development of Infants and Young Children	Factors and conditions that affect early development. Strategies for promoting attachment, self-regulation, resilience, adaptation, and coping.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**544**	Assessment and Evaluation of Infants and Young Children	Developmental assessment and related program planning for infants and young children. Emphasizes authentic, individualized, family-centered and culturally competent approaches.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**545**	Curricula, Methods, Technology, and Adaptations for Infants and Young Children	Developmentally appropriate practices. Serving young children with diverse abilities in natural, inclusive settings. Emphasizes cognitive development, social competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**546**	Communication, Language, and Early Literacy	Early communication development and language acquisition. Facilitating communicative competence and early literacy for infants and young children with diverse abilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**547**	Supporting Motor Development	Early sensorimotor development. Strategies to facilitate the acquisition of motor skills and address the needs of children with motor disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**554**	Learning as a Collaborative Practice	Includes knowledge and procedures for involvement and training of parents and caregivers of preschool and severely handicapped individuals. Requires field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**555**	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**578**	Student Teaching in Special Education	Y grade only. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**579**	Apprentice Teaching in Special Education	Apprentice teaching in special education setting. Must be taken four times for a total of 12 semester hours. Lab, field experience. Fee.	N	FLD	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**222**	Orientation to Education of Exceptional Children	Includes gifted, mildly handicapped, severely handicapped, and the bilingual/multicultural exceptional child.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB & C	
SPE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
SPE	**310**	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**312**	Mental Retardation	Characteristics and assessment specific to mental retardation. Emphasizes terminology, development, educational programming, and therapeutic procedures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**314**	Introduction to Bilingual/Multicultural Special Education	Theoretical background and practical application of general issues regarding the education of bilingual/multicultural handicapped children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**317**	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**318**	Family-School Collaboration	Explores relationships between families of children with special needs and professionals in educational institutions and community agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**320**	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L	Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**322**	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**336**	Behavioral and Emotional Problems in Children	Characteristics and assessment specific to emotionally and behaviorally disturbed children. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**361**	Introduction to Learning Disabilities	Characteristics and assessment specific to learning disabilities. Emphasizes terminology, development, and educational programming.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**396**	Field Experience I	Applies course content while working with students with disabilities in inclusive settings. Emphasizes classroom and behavior management. Fee.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**397**	Field Experience II	Applies course content in a special education setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**411**	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**412**	Evaluating Exceptional Children	Normative and criterion-referenced diagnostic techniques, including formative evaluation. Emphasizes application. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**413**	Methods in Language, Reading, and Mathematics for Exceptional Children	Methods, techniques, and materials for use in prescriptive teaching. Requires daily practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**414**	Instructional Management and Strategies: Reading and Writing	Organization and delivery of instruction, including formative evaluation techniques. Instructional techniques of reading and writing. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**415**	Classroom and Behavior Management	Analysis and intervention into social behavior problems of exceptional populations. Requires regular participation in a field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**416**	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators. May be repeated for credit.	Y	FLD	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**417**	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
SPE	**419**	Instruction in Content Areas: Science and Social Studies	Develops and implements instructional methods and learning strategies for students with special needs related to science and social studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**423**	Technology & Instructional Methods in Language, Reading, & Mathematics for Special Needs students	Technology and instructional methods in language, reading, and mathematics for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**424**	Methods of Cross-Categorical Special Education	Assessment and instructional methods for students with mild to moderate retardation, learning disability, emotional disabilities, and physical/health impairment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**431**	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**478**	Student Teaching in Special Education	Y grade only. Fee.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3-15		
SPE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		Pre-requisite: Admission to Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisites: Must be an Honors student
SPE	**493**	Honors Thesis		N	THE	N	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6	L	Pre-requisites: Must be an Honors student
SPE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
SPE	**496**	Field Experience III	Applies course content in a special education setting. Emphasizes observation pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-7		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Pre-requisite: Admission to Professional Teacher Preparation Program
SPE	**576**	Field Experience	Applies course content in special education classrooms: observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		Prerequisite(s): Valid copy of AZ DPS fingerprint card on file at ASU; MEd in Special Education major
SPF	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**298**	Honors Directed Study		N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**301**	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	L	Pre-requisites: completion of first year composition
SPF	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**401**	Teachers and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science, and law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		
SPF	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		
SPF	**492**	Honors Directed Study		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**493**	Honors Thesis		N	LEC	N	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6	L	Pre-requisites: Must be an Honors student
SPF	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		
SPF	**497**	Honors Colloquium		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-6		
SPF	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-7		
SPF	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-3		
SPF	**501**	Culture and Schooling	Introduces social science concepts of culture and the cultural milieu in which schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	2-3		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**511**	School and Society	Interrelationship of school and society and the role of education in social change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**515**	Gender and Education	Methods and materials for remediating the basic academic problems of exceptional children. Prerequisite: admission to MEd in Special Education program.	N	SEM	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**530**	Sociology of Education	Current issues in the sociology of education: stratification, social mobility.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**544**	Philosophical Foundations of Education	Theories of education in ancient, medieval, and modern classical and contemporary philosophies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**583**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**597**	Teacher and the Law	For the professional teacher preparation program. Analysis and interpretation of classroom behavior from perspectives derived from philosophy, social science and the law.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-2		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**603**	Visual Ethnography in Education	Advanced qualitative methods class combining ethnography with the use of video and still photography in data gathering and presentation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**612**	Evaluation Theory	Explores the major theories of evaluation (inquiry leading to value judgments) in educational policy through examination of cases.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**622**	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**634**	Foundations of Educational Inquiry	Overview of the nature of inquiry examining the philosophy of science and social science, approaches to knowing in the humanities. Credit is allowed for only SPF 634 or 534.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**677**	Foundations of Educational Reform Movements	Historical and contemporary survey of curricular reform movements in the United States with emphasis on equity and social justice issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	**685**	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SPF	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1.		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	**100**	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & G	
SSH	**200**	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111. Students who have credit for ASB 200, may not enroll in SSH 200
SSH	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**301**	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB & H	Pre-requisites:Completed SSH 100 or ASB 100 with a grade of D or better. If you have credit in ASB 301,or HST 301 you may not enroll in SSH 301
SSH	**355**	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	HU or SB	Pre-requisites: Students who have credit for ASB 355, may not enroll in SSH 355

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	**370**	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: ENG 102 (or ENG 105/108) with C or better; ASB 100 (or 102), Soc 101, SOS 110, or SSH 100 with C or better; Credit for ASB, SOC, SOS or SSH 370
SSH	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**400**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	(L or SB) & G	Pre-requisites: ASB 100 (or SSH 100) or ASB 102 with D or better
SSH	**401**	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		Pre-requisites: ASB 100 or ASM 104 with D or better or currently enrolled; SSH 100 with D or better or currently enrolled
SSH	**402**	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites:SSH 400 or ASB 440 with a grade of D or better or currently enrolled. If you have credit in ASB 452, you may not sign up for SSH 402
SSH	**403**	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	FLD	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	SB & G	Pre-requisites:SSH 100 or ASB 100 with a grade of D or better, or currently enrolled. If you have credit for ASB 443, you may not enroll in SSH 403
SSH	**404**	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	C	
SSH	**405**	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		
SSH	**414**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.	SB	Pre-requisites: Students who have credit for ASM 414, or SOS 414, may not enroll in SSH 414. Must have one of the following with a grade of C or better: ASB100, 102, 222, 223; ASM 104; AML 100, SSH 100
SSH	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**492**	Honors Directed Study		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**493**	Honors Thesis		Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		
SSH	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	**502**	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	**503**	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**510**	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**511**	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: SSH 510 or ASB 510 completed with D or better or currently enrolled
SSH	**512**	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511 with D or better. Must be graduate student
SSH	**513**	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3.		Pre-requisites: ASB 500 completed with D or better or currently enrolled; SSH 511 or ASB 511 completed with D or better or currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	**514**	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4.		
SSH	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
SSH	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STM	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STM	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Graduate College	Graduate College	1-12		
STM	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-4		
STM	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Graduate College	Graduate College	1-12		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	College of Tech & Innovation	Department of Applied Sciences and Mathematics	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Must be a freshman with 25 or less total earned hours
STP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**231**	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Prerequisites: MAT 117 or 142 with C or better
STP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**298**	Honors Directed Study		N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**425**	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	**427**	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		Pre-requisites: STP 421 with C or better
STP	**429**	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.	CS	Pre-requisites: STP 420 with C or better
STP	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Pre-requisites: Must be an Honors student
STP	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Pre-requisites: Must be an Honors student
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	**525**	Advanced Probability	Measure-theoretic foundations of probability, distribution functions and characteristic functions, laws of large numbers and central limit theorems, conditional probabilities, martingales, and topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**526**	Theory of Statistical Linear Models	Multinormal distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**527**	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**530**	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**531**	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**532**	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**533**	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**534**	Applied Discrete Data Analysis	Models for discrete and count data, measures of association, and log-linear and regression models for contingency tables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**535**	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3.		
STP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

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STP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1.		
STP	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**220**	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**300**	Introduction to Probability	Probability models and computations, joint and conditional distributions, moments, families of distribution, stochastic processes, simulation.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Pre-requisite: Must have completed MAT210 with a grade of C or greater or be currently enrolled.
STP	**326**	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
STP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		
STP	**420**	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 with C or better
STP	**421**	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	3.		Prerequisites: MAT 272 or 267 with C or better
STP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		

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STP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Mathematical and Natural Sciences	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
STP	**226**	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation. Not open to majors in mathematics or the physical sciences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	CS	Pre-requisites: MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better
STP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
STS	**101**	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**110**	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**301**	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**302**	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites: ENG 101, ENG 105, ENG 107 or ENG 111 with C or better
STS	**303**	History of Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	H	
STS	**304**	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**305**	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**306**	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**317**	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	Credit is allowed for only STS 110 or 317
STS	**318**	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**325**	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**327**	Science and Applied Ethics	Complex issues occurring on the interface of science, society, and values, with a focus on the dilemma of animal subjects in research.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**328**	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**329**	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**330**	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**331**	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**332**	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & G	
STS	**364**	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	Pre-requisites:STS 101 and STS 301 with a grade of D or better

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STS	**380**	Science, Technology, and Values	Interdisciplinary evaluation of the mutual interaction of science, technology, and society.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**382**	Ethics in Engineering and Technology	Role of engineering and technology in society; focuses on ethical issues confronting engineering and technology professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**385**	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**401**	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: MAT 142; STS 301, BIS 300, or BIS 301 with D or better
STS	**425**	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB	
STS	**480**	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
STS	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
STS	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
STS	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-7		
STS	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
SWG	**501**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**502**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite: MSW or DSW student
SWG	**503**	Development of Families in Oppressive Context	Addresses the development of healthy families and children. Explores essential tasks of human development and theories that inform practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be admitted to MSW.
SWG	**504**	Theories of Human Behavior	Addresses development of healthy adults and human behavior in groups, organizations, and communities.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; SWG 503 with a C or better or currently enrolled
SWG	**510**	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	**511**	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better
SWG	**512**	Values and Ethics of Social Work Practice I	Develops a basic understanding of diverse ethical systems and their application to a broad range of human problems in various social and cultural contexts.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student
SWG	**513**	Social Work Generalist Practice II	Building on SWG 512, continues to develop and apply a generalist framework of social work practice. Examines theories of practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be admitted to the MSW and have completed SWG 512 with a grade of C or greater
SWG	**519**	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**520**	Research and Advocacy	Develops knowledge and skills needed to utilize and engage in social research related to advocacy issues and the evaluation of social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**531**	Social Policy and Services I	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral of Social Work student
SWG	**532**	Policy and Social Change	Overview of the history, development, pertinent concepts, skills, and definitions associated with social welfare problems and policies.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**533**	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student.

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SWG	**534**	Diversity and Underserved Populations	Examines issues of privilege and oppression, including their impact on the social work process, with the goal of developing a culturally competent master's-level social worker.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student
SWG	**540**	The Professional Experience I	150 clock hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters of Social Work student; Co-requisite: SWG 512
SWG	**541**	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Master or Doctor Social Work student; Pre or Co-requisite: SWG 510 with a grade of C or greater if completed
SWG	**542**	Field Practicum II	See SWG 541. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG510, SWG541, and SWG 511 with a C or greater or be currently enrolled (or be enrolling in SWG511)
SWG	**543**	The Professional Experience II	250 hours of supervised social work practice plus seminar. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	LEC	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: Master of Social Work student; SWG 512 with C or better; Co-requisite: SWG 513
SWG	**550**	Co-Occurring Disorders	Provides sound theoretical and practical orientations to working with persons who have co-occurring disorders.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**551**	Crisis Intervention	Covers the basics of crisis intervention in social work practice, along with applications to several different populations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**552**	Issues in School Social Work	Provides knowledge and skills necessary to implement effective social work services in a school setting.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**553**	Social Work with American Indians	Introduces social work issues relevant to Native Americans. Explores effective methods with Native American clients.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**554**	Substance Abuse	Psychological and sociocultural determinants of substance abuse. Overview of social policies and treatment approaches.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**555**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWG 555 or SWU 455.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**557**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 557 or SWG 457.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student
SWG	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**585**	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Masters or Doctoral Social Work student
SWG	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisite: Master or Doctor Social Work student.
SWG	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-12		
SWG	**600**	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	**603**	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 502; SWG 511; SWG 542
SWG	**604**	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 603
SWG	**606**	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student; SWG 502 with C or better

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SWG	**608**	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 502; SWG 511; SWG 542
SWG	**609**	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWG 608 compeleted with D or better or currently enrolled
SWG	**610**	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW or MSW Adv Standing student; Co-Requisite: SWG 693 and 645
SWG	**611**	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	College of Public Programs	School of Social Work	2-3		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 510 completed with C or better; SWG 511 completed with C or better or currently enrolled; SWG 541 and SWG 542 completed with Y or currently enrolled
SWG	**612**	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**613**	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: SWG 603
SWG	**614**	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600- level SWG courses.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**615**	Effective Intervention with Children and Adolescents	Provides a framework of knowledge, theories, and skills for effective social work practice with vulnerable children and adolescents.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing
SWG	**616**	Social Work with Chemically Dependent Families	Examines dynamics of the chemically dependent family and presents clinical approaches for intervening in the family system and subsystems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**617**	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**618**	Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG611 with a grade of C or greater or be currently enrolled
SWG	**619**	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG519 with a grade of C or greater or be currently enrolled
SWG	**621**	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 611 completed with a C or better or currently enrolled; SWG 641 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or better if completed
SWG	**623**	Agency and Community-Based Research in Social Work	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Soc Wrk student; SWG 519 or 520 completed with C or greater or currently enrolled; Pre or Co-requisite: SWG 680 with C or greater if completed, or currently enrolled.
SWG	**626**	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either:MSW or MSW Adv Standing; AND completed SWG 610 with a C or greater
SWG	**630**	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**631**	Advanced Policy Analysis	Supports advanced generalist practice with emphasis on policy analysis and philosophy and politics of resource allocation and social welfare.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be a student in either: MSW or MSW Adv Standing
SWG	**632**	Social Policy and Services II	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG531 with a grade of C or greater or be currently enrolled
SWG	**633**	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 542 completed with a Y or currently enrolled
SWG	**641**	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal. fee	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or better or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 611 (with a C or better if completed)
SWG	**642**	Advanced Practicum: Direct Practice II	See SWG 641. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work; SWG 511 & SWG 611 with a C or greater or be currently enrolled; SWG 542 & SWG 641with a Y or be currently enrolled; Pre or Co-requisite: SWG 613, 616, 617, 618 or 691 with a C or greater if completed
SWG	**643**	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 511 completed with a C or greater or currently enrolled; SWG 542 completed with a Y or currently enrolled; Pre or Co-requisite: SWG 681 or SWG 682 with a C or greater if completed

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SWG	**644**	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643. Fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Masters or Doctoral Social Work student; SWG 511 with C or bettter; SWG 542/643 with a Y grade; SWG 681 or 682 with a C or better; Pre/Co-requisite:SWG 680 with C or better
SWG	**645**	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: MSW student; SWG 542 with a grade of Y OR MSW Advanced Standing student; co-enrolled in SWG 610 and SWG 693
SWG	**646**	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only. Fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either the Standard MSW or MSW Adv Standing; completed SWG 645 with a grade of Y; AND be co-enrolled in SWG 614, and SWG 693
SWG	**650**	Social Work Ethics/Law		N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**653**	Theory and Practice of Family Therapy	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Must be a student in either: MSW or MSW Adv Standing.
SWG	**653**	Introduction to Holistic Therapies	Provides advanced theoretical knowledge and family treatment models for the practice of social work with families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**654**	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**655**	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**656**	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites:Must be a graduate student
SWG	**657**	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Aryuvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: must be enrolled in a graduate-level program (degree-seeking or non-degree-seeking)
SWG	**660**	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: Must be Masters or Doctoral Social Work student; SWG 681 or SWG 682 completed with a C or greater or currently enrolled; Pre or Co-requisite: SWG 623 with C or greater if completed
SWG	**681**	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**682**	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Master or Doctor Social Work student; must have completed SWG580 with a grade of C or greater
SWG	**683**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**685**	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requistes: SWG 681, 682; Co requisite, SWG 523
SWG	**686**	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWG	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-12		
SWG	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	College of Public Programs	School of Social Work	1-12		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		Pre-requisites:Must be a student in either: MSW or MSW Adv Standing
SWG	**697**	Special Topics in Working with Diverse Groups	Provides practice strategies for clients of specific marginalized groups; addresses access to resources; describes the larger political context and policy issues that impact the particular group.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	3.		
SWG	**700**	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**720**	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Master or Doctor Social Work student.
SWG	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Public Programs	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	College of Public Programs	School of Social Work	1.		
SWG	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	College of Public Programs	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	**171**	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & H	
SWU	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**250**	Stress Management Tools	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	
SWU	**291**	Social Service Delivery Systems	Federal, state, private not-for-profit and for-profit social service delivery system's purpose, structure, and professional roles. Includes 60 service learning hours.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 with a D or better; Pre or Co-requisites: SWU 171 (with a C or better if completed)
SWU	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**295**	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB & C	Pre-requisites: PGS 101, SOC 101 or SOC 301 with D or better; Pre or Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	**302**	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credidt.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**303**	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	L or SB	Pre-requisites: PGS 100, PGS 101, SOC 101 or SOC 301 completed with a D or greater or currently enrolled; Pre or Co-requisites: SWU 171, SWU 291 and SWU 295 (with a C or better if completed)
SWU	**310**	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	**320**	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: student must have completed SWU310 with a grade of C or greater or be currently enrolled or enrolling during the same term
SWU	**321**	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	**331**	Social Policy and Services I	History, philosophy, and values of social welfare; function and role of social welfare in society; development of the social work profession and practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	H	Pre-requisites: must be a Social Work student and have completed the following with a C or greater or be currently enrolled: ECN 111 or 211, POL 110 or POL 310 or POS 110 or POS 310, SWU 171 or SWU 271, and SWU 291.

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SWU	**332**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: student must have completed SWU310 with a grade of C or greater or be currently enrolled/enrolling AND must have completed ECN111 with a grade of D or greater or be currently enrolled
SWU	**337**	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**340**	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 (SWU 301) with C or better; Pre or Co-requisite: SWU 310 (with C or better if completed)
SWU	**374**	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre/Co-requisite: SWU 310 with C or better if completed
SWU	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	**402**	Human Behavior in the Social Environment II	Sequel completing study of life span development and behavior which forms base for social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	SB	Pre-requisites: SWU 303 with C or better
SWU	**410**	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work undergraduate; SWU310 with C or better; PHI 101, 105 or 306 with D or better; Co-requisites: SWU 412 and SWU 413
SWU	**411**	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU414 and SWU415 AND must be a Social Work major or must have completed SWU410, SWU412, or SWU413 with a grade of C or greater or be currently enrolled
SWU	**412**	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only. fee.	N	PRA	N	YGB	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU413; must have completed SWU310 with C or better; Must be a Social Work major
SWU	**413**	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: must be taken concurrently with SWU410 and SWU412; must have completed SWU 310 with C or better; Must be a Social Work major
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	OPT	College of Public Programs	School of Social Work	5.		Pre-requisites: must be co-enrolled in SWU 411and 415, and completed SWU 410 and SWU 413 with a grade of C or greater or be currently enrolled.
SWU	**414**	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only. fee.	N	PRA	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	**415**	Field Instruction Seminar II	Field-focused seminar, including practice evaluation. 1.5 hours a week.	N	SEM	N	OPT	College of Public Programs	School of Social Work	1.		Pre-requisites: must be co-enrolled in SWU 411 and 414, and have completed the following with a grade of C or greater or be currently enrolled: SWU 410, SWU 412, and SWU 413.
SWU	**415**	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	**420**	Practice-Oriented Research	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**432**	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisites: Social Work student; SWU 310 with C or better; ECN 111 or ECN 211 with D or better; POS 110 or 310 with D or better; Co-requisites: SWU 410, SWU 412, and SWU 413
SWU	**442**	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**444**	Issues in School Social Work	Demonstrates how community, family, and school are interdependent using an ecological metaphor, and introduces school social work.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.		Pre-requisite: Must be Social Work student and have earned C or better in SWU 410, 412, and 413 or be currently enrolled.
SWU	**455**	Social Work Practice Skills with Latinos	Focuses on communication skills necessary and appropriate for social work practice with Spanish-speaking clients and their families. Credit is allowed for only SWU 455 or SWG 555.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**457**	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S. Credit is allowed for only SWU 457 or SWG 557.	N	SEM	N	OPT	College of Public Programs	School of Social Work	3.		
SWU	**474**	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	College of Public Programs	School of Social Work	3.	C	Pre-requisite: must have completed SWU 310 with a grade of C or greater or be currently enrolled
SWU	**492**	Honors Directed Study		N	RSC	N	OPT	College of Public Programs	School of Social Work	1-6		
SWU	**493**	Honors Thesis		N	IND	N	Z1	College of Public Programs	School of Social Work	1-6	L	Pre-requisite: must be an honor student
SWU	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-4		
SWU	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Social Work	1-7		

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SWU	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Public Programs	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TA	**488**	Elem Air Transport		Y	LEC	Y	CNV	Ira A. Fulton Engineering	INACTIVE - Dept Aeronautical Management Technology	3.		
TCL	**101**	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**111**	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**201**	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**202**	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**210**	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**211**	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**220**	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**270**	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society. Fee.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**303**	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	
TCL	**304**	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**305**	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	FLD	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre or Co-requisites: TCL 303 and TCL 304 with a D or better if completed
TCL	**310**	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**314**	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & H & C	
TCL	**315**	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	
TCL	**321**	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**323**	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4.	SB & C	
TCL	**326**	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**327**	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	**328**	Latina/o and Latin American Religions and Cultures	Surveys the formative myths, rituals, and symbols and religious expressive cultures of U.S. Latinos and Latin Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	

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TCL	**331**	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**332**	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & H & C	
TCL	**335**	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites:Completed ENG 101 & ENG 102 with a grade of C or better. If credit has been received in HST 323 or AFR 335, you may not enroll in TCL 335
TCL	**340**	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**341**	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**342**	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	
TCL	**350**	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C & G	
TCL	**351**	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	
TCL	**352**	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**363**	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for ENG 363, you may not enroll in TCL 363. Completed ENG 101, or ENG 107, or ENG 105 with a D or better or be currently enrolled
TCL	**364**	Transborder Chicana/o and Mexican Literature of Southwest North America Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	Pre-requisites: SPA 314 or 316 with C or better
TCL	**370**	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	
TCL	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
TCL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**410**	Race, Medicine, and the Body	The ways in which medicine, disease, and health outcomes are affected by culture, gender, and social location.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L	
TCL	**422**	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: TCL 321 with C or better
TCL	**424**	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB	Pre-requisites: TCL 321 with C or better
TCL	**443**	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	
TCL	**444**	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	SB & G	Pre-requisites: Minimum 45 earned hours; students who have credit for ASB 464, may not enroll in TCL 444
TCL	**445**	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Uses a transregional and transborder approach, focusing on the interconnections of this modern genre across the borders of Spanish América. Takes a long historical view of the genre by reading representative stories of important literary movements and the aesthetic and cultural values they promoted and fostered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L or HU	
TCL	**446**	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic ¿minority¿ groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or ¿nuyoricans¿)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or SB) & G	Pre-requisites: May not enroll in TCL 447, if credit received in WST 447 or SGS 454

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	**464**	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	Pre-requisites:If you have credit for FMS 464, you may not sign up for ENG 458/TCL 464
TCL	**465**	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU & C	Pre-requisites: ENG 102, 105, or ENG 108 with a grade of C or better. May not enroll in TCL 465 if received credit for FMS 465
TCL	**466**	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	C	
TCL	**470**	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	HU	Pre-requisites: ENG 102, 105 or 108 completed with a C or better; You may not enroll in TCL 470 if you have credit for FMS 470
TCL	**471**	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		
TCL	**478**	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.		Pre-requisites: ASB 102 or SOC 101 with C or better; 56 hours or more; Students who have credit for SOC 478 or ASB 478 may not enroll in TCL 478
TCL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	**485**	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	(L or HU) & C	
TCL	**488**	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples¿ experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3.	L & C	
TCL	**492**	Honors Directed Study		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		
TCL	**493**	Honors Thesis		N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Pre-requisites: Must be an Honors student
TCL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		
TCL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TDM	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-3		
TDM	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**205**	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**210**	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: NLM 160 or PRM 120 with C or better if completed; Credit is allowed for only NLM, TDM or PRM 210

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**298**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**301**	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre/Co-requisite: PRM 120 or NLM 160) with C or better if completed; Credit is allowed for only NLM, PRM or TDM 301
TDM	**302**	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	C	Prerequisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 semester hours. Students who have credit for NLM 302 or PRM 302 may not enroll in TDM 302
TDM	**325**	Tourism Accommodations	Local, national, and international overview of the lodging and food service industries.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: RTM 373 or TDM 205 with C or better
TDM	**345**	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**350**	Tourism Marketing	Critical examination of marketing principles; applications to travel, tourism, and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better; Minimum 45 hours
TDM	**360**	Policy, Planning, Development of Recreation and Tourism Resources	Investigates the policy, planning, development, and management practices related to the provision of recreation and tourism opportunities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**372**	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	**386**	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**401**	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: Prerequisite: TDM 210 or PRM 210 with C or better; and TDM 301 or PRM 301 with C or better; and PRM 303 or TDM 372 with a C or better. Students who have credit for PRM 401, may not enroll in TDM 401
TDM	**402**	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-or Co-requisites: TDM 401 or PRM 401 or NLM 410 with C or better. Students who have credit for PRM 402, or NLM 402, may not enroll in TDM 402
TDM	**403**	Pre-Internship Workshop	Prepares professional status students for the Senior Internship. Includes both workshop and online delivery.	N	LEC	N	YGB	College of Public Programs	School of Community Resources and Development	1.		Pre-requisites: PRM 303 or TDM 372 with C or better Students who have credit for NLM 403 or PRM 403, may not enroll in TDM 403
TDM	**415**	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	**448**	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: TDM 205 with C or better
TDM	**451**	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
TDM	**458**	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.	G	
TDM	**463**	Senior Internship	Supervised guided experience in selected agencies. Fee.	N	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	6-12		Prerequisites: TDM 402 (or REC 482) and TDM 403 (or REC 499 Pre Internship Workshop) with a C or better or currently enrolled; Must be a Tourism Development and Management or Recreation (Tourism concentration) student
TDM	**480**	Sustainable Tourism	Tourism has a multitude of impacts, both positive and negative, on people's lives and on the environment. Critically analyzes the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		Pre-requisites: PRM 120 or TDM 205 or 60 minimum hours

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TDM	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	**492**	Honors Directed Study		N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Community Resources and Development	1-6	L	Pre-requisites: Must be an Honors student
TDM	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-4		
TDM	**497**	Honors Colloquium		Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-6		
TDM	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Public Programs	School of Community Resources and Development	1-7		
TDM	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Public Programs	School of Community Resources and Development	1-3		
TEL	**501**	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**504**	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**505**	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**600**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**683**	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		
TEL	**700**	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)

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TEL	**701**	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**702**	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**703**	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**704**	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**711**	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**712**	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action researc, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**713**	Applied Mixed Methods of Inquiry	Data collection, analysis, interpretation in studies combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**793**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**795**	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1.		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division W	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
TEL	**111**	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	SB	
TEL	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**212**	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
TEL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**311**	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs. Fee.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**313**	Educational Technology in the K-12 Curriculum	Applies and integrates educational technologies in all curricular areas; examines theoretical and practical issues for diverse learners. Fee.	N	LEL	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.
TEL	**314**	Classroom Assessment	Assessment and evaluation of student leaning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.		Pre-requisites: Admission to Professional Teacher Preparation Program.

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TEL	**315**	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	L or SB	
TEL	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1.		
TEL	**492**	Honors Directed Study		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**493**	Honors Thesis		Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-6		
TEL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
TEL	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-3		
THA	**101**	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
THA	**102**	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisites:THA 101 with a grade of C or better
THA	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Freshman with minimum 25 hours
THA	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**201**	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 102 with C or better
THA	**202**	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing. Fee.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:THA 201 with C or better
THA	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
THA	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
THE	**307**	Acting:		N	LEC	N	CNV	Herberger College of the Arts	School of Theatre and Film	3.		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	**125**	Orientation to Theatre and Film	Orientation to university and school resources and procedures. Career planning and guidance. Community-building exercises. Attendance and written response to performance and media events. Required for BA Theatre and BA Film (film and media production concentration) majors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Theatre and Film students only
THE	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**220**	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	L or HU	Pre-requisites: Herberger Institute students in specific majors; THE 125 with B- or better; ENG 101, ENG 105 or ENG 107 with C or better
THE	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**320**	History of the Theatre I	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites:Must have completed THE220 with a C or greater or be currently enrolled
THE	**321**	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must have completed THE220 and THE320 with a C or greater or be currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**322**	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & H	Prerequisites: Must NOT be a Theatre student
THE	**325**	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisites: Must be a Theatre student
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**403**	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**404**	Foreign Films and Filmmakers	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	G	Prerequisites: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**405**	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors. May be repeated for credit when topics vary. Fee (hybrid/Internet).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Prerequisites:Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**406**	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production. Fee (hybrid/Internet).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU & C	Prerequistes: Must have completed ENG102, ENG105 or ENG108 with a C or greater or be currently enrolled
THE	**421**	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	HU	Pre-requisites:ENG 102(or Eng 105, or 108) with a grade of D or better, or currently enrolled
THE	**422**	Latina and Latino Theatre	Readings, discussion, video of dramatic literature and production styles of Latina and Latino playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 102, ENG 105 or ENG 108 with a C or greater or currently enrolled OR Theatre Masters students
THE	**423**	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prequisites: Must be a Masters student , or must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled
THE	**424**	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**426**	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prequisites: Must have completed ENG102, ENG105, or ENG108 with a C or greater or be currently enrolled OR be a Masters Theatre student
THE	**430**	History of Costume: Western Tradition	Studies major costume styles throughout history of Western civilization and how these fashions reflected society. Explores how styles can be used by theatrical costumers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THE	**440**	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre undergraduate student; THE 220 and THE 320 with C or better
THE	**480**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Junior standing and above. Students who have credit for THE 581, may not enroll in THE 480
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		Pre-requisites: Must be a Fine Arts student; Must be an Honors student
THE	**493**	Honors Thesis		N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be a Fine Arts student ; Must be an Honors student
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THE	**500**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**504**	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**505**	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**510**	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**520**	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THE	**524**	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must be a Theatre Education or Theatre for Youth student
THE	**525**	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THE524 with a B or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	**562**	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: THP560 with a B or better
THE	**581**	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis. Credit is allowed for only THE 581 or 480.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Must be a graduate student. Students who have credit for THE 480, may not enroll in THE 581
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Graduate student
THE	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art Theatre student
THE	**600**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**695**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THE	**700**	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THE	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Theatre student
THE	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-15		

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THE	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-15		
THE	**100**	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
THE	**201**	Film:Creat Procss I	Elements of the theatrical film: cinematography, sound, editing, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**320-W**	History of the Theatre	Traces major developments in theatre production from its beginning to the 17th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**321**	History of Theatre	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & H	
THE	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**420**	History of the American Theatre	History of the plays, artists, and events in the development of American theatre from colonial to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		
THE	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THE	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7		
THE	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
THE	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THE	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**101**	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must NOT be a Theatre student
THP	**102**	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student
THP	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**201**	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		
THP	**202**	Acting II: Realism	Rehearsal techniques and application of action to dramatic text. Emphasizes realistic drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Completed THP101 or THP102 with a B or better; Completed THE 220 with a C or better or be co-enrolled in THE 220
THP	**213**	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**214**	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience. fee	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	4.		Prerequisites:Must be a Theatre student
THP	**218**	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Fine Arts Theatre student; THE 220 AND THP 102 with a C or greater .

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**251**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**260**	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed ENG101,105 OR 107 with a C or greater or be currently enrolled
THP	**261**	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: ENG 101, 105 or 107 with C or better
THP	**272**	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**277**	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP101 or THP102 with B- or better
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**301**	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**302**	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 101 (or THP 102), THP 202, THP 272, THP 277 and THE 220 with C or better
THP	**307**	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites:Must have completed THP101 or THP102 with a C or greater or be currently enrolled.
THP	**311**	Improvisation with Youth	Basic materials, techniques, and theories for facilitating improvisational drama with children and youth. Not open to freshmen.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman student
THP	**312**	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite: Must NOT be a Freshman or Sophomore student
THP	**313**	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP213 or THP214 with a C or greater or be currently enrolled
THP	**317**	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Theatre student; Corequisite: THP301
THP	**318**	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP218 AND THP213 or THP214 with a C or greater or be currently enrolled
THP	**320**	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**322**	Acting: Voice-Overs and Radio Drama	Applies effective vocal techniques to commercials, books on tape, radio dramas. Preparation of audition tape, performance in radio drama.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**331**	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP214 with a C or greater or be currently enrolled.
THP	**340**	Scene Design	Studio projects in designing scenery for contemporary stages. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP 213 with a grade of C or greater and THE 220 with a grade of C or greater or be currently enrolled.
THP	**345**	Lighting Design	Principles and theory of stage lighting design, including design process and execution, equipment, and light plots. Fee.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Sophomore standing or above
THP	**350**	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a BA Theatre major OR a Fine Arts BFA student
THP	**352**	Foundations of Arts Entrepreneurship	Develops entrepreneurial knowledge and skills supporting the self-actualization, self-efficacy, and market acumen of artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:C or better for Herberger BA in the Arts majors (FAATSBA): HDA 294 ST: Creativity and Innovation in Design and the Arts; non- majors: 42 minimum hours
THP	**360**	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:Must have completed ENG210 or THP260 with a C or better, or be co-enrolled in THP 260
THP	**361**	Intermediate Screenwriting	Character and dialogue development, choosing correct structure, importance of subplots, developing a story into a completed thirty-page screenplay.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 261 with D or better or currently enrolled
THP	**372**	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP272 with a B or greater or be currently enrolled; must be junior academic level or higher
THP	**377**	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP277 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**378**	Acting: Stage Dialects	Major dialects needed for actors; techniques for researching and learning dialects; phonetic analysis of dialects.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP377 with a B or greater or be currently enrolled; Junior academic level or higher
THP	**385**	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 101 or THP 102 with C or better; Junior standing
THP	**386**	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP 101 or THP 102 with a B or greater or be currently enrolled
THP	**387**	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP101 or THP102 with a B or greater or be currently enrolled OR must be a Film and Media Production student.
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	**401**	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-2		Prerequisites: THP 301 with a C or better, or Master of Arts or Master of Fine Arts student
THP	**406**	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 completed with a C or better
THP	**411**	Methods of Teaching Drama	Applies materials, techniques, and theories with grades K-8 youth. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Graduate student OR must have completed THP311 with a C or greater or be currently enrolled
THP	**418**	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 318 with a C or greater or be currently enrolled OR Herberger Master of Art or Master of Fine Arts students
THP	**428**	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	**430**	Costume Design	Principles of costume design with projects in both modern and period styles. Includes budgets and fabric/pattern estimates.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must be a Theatre Scenography or Performance Design student OR must have completed THP214 with a C or greater or be currently enrolled
THP	**431**	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP214 AND THP331with a C or greater or be currently enrolled in both OR must be a Theatre Scenography or Performance Design student
THP	**440**	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**441**	Scene Painting	Studio projects in painting stage scenery. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP340 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**442**	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**444**	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP213 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student
THP	**445**	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Must have completed THP345 with a C or greater or be currently enrolled OR must be a Theatre Scenography or Performance Design student AND have completed THP444 with a B or greater or be currently enrolled
THP	**450**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequistes:Must be a Theatre student
THP	**451**	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites:THP 450 with a grade of D or better, or co-enrolled
THP	**452**	Arts Entrepreneurship Seminar	Challenges students to learn how individuals have used their creative skills to create new arts business models. Case studies examine how creativity can spur new opportunities in the arts industry. Students complete their own project proposals.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: THP 352 with C or better
THP	**460**	Advanced Playwriting	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage, culminating in a full-length script.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must be a Fine Arts BFA student; Must have completed THP360 with a C or greater or be currently enrolled
THP	**461**	Scripts in Progress	Studio work with the instructor, centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisite:Must have completed THP460 with a C or greater or be currently enrolled
THP	**482**	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.	C	Prerequisite:Must be a sophmore academic level or higher
THP	**483**	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: THP 202 with C or better or currently enrolled; Junior academic level or higher OR Master of Fine Arts student
THP	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites:Must be a Theatre or Film student
THP	**489**	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites:Must have completed THP 101 or THP 102 and THE 220 with a B or greater; Junior academic level or higher
THP	**492**	Honors Directed Study		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6		
THP	**493**	Honors Thesis		N	RSC	N	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-6	L	Pre-requisites: Must be an Honors student
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		
THP	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-7		Prerequisites: Must be a Theatre student

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THP	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-3		
THP	**501**	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	**504**	Acting: Styles	Fundamentals including combat, scansion, poetic language, acting style. Scene study, ensemble performance projects focused on Shakespeare, new scripts. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-8		Pre-requisites: THP 503 with a D or better
THP	**505**	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1.		Pre-requisites: Master of Fine Art Theatre student
THP	**506**	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit. fee	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	**507**	Acting: Advanced Research and Performance	Acting in advanced theatre projects, productions, or collaborative performance in directing classes.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**511**	Methods of Teaching Drama	Applies dramatic materials, techniques, and theories with grades K-8 youth. Regular participation with children. Credit is allowed for only THP 511 or 411.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**512**	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Graduate student
THP	**514**	Projects in Community-Based Drama	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master in Arts, Master in Fine Arts or PHD Theatre student
THP	**518**	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**519**	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**520**	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**521**	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**522**	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**523**	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**524**	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**525**	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**526**	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**527**	Design II: Conceptualization and Collaboration	Readings and research in stage management and participation as a stage manager in a university theatre production	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**528**	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**529**	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**530**	Advanced Costume Design	Advanced studio projects in costume design for a variety of production forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Arts Theatre student
THP	**540**	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab. Fee.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	**545**	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts Theatre student
THP	**550**	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		MFA Theatre student
THP	**555**	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisites: Master of Fine Arts Theatre student
THP	**556**	Performance Technology		N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		

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THP	**557**	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Pre-requisite: Herberger Institute of Design and the Arts Graduate student
THP	**560**	Playwright's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Art Theatre student
THP	**561**	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Theatre student
THP	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**582**	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Fine Arts Theatre student
THP	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Theatre Master student
THP	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Pre-requisites: Fine Arts Graduate student
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-4		Pre-requisites: Fine Arts Graduate student
THP	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student
THP	**611**	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	3.		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**618**	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Theatre and Film	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	**649**	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	**680**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		
THP	**693**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**783**	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Theatre and Film	1-12		Prerequsite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
THP	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

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THP	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
THP	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
TMC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**331**	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre- or Co-requisites: TMC 346; ABS 350, APM 301, QBA 221, STP 420 or OMT 401
TMC	**346**	Management Dynamics	Management challenges and the leadership skills needed to achieve organizational objectives in the changing industrial and technical environments.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**396**	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Prerequisites:Must be at least a Junior AND be a Tech Sci BAS or BS student.
TMC	**470**	Project Management	Introduces techniques for managing small groups within larger organizations, including team building, motivating, planning, tracking activities, and computer tools.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		Pre-requisites: Technology & Innovation BAS student OR IMC 346, IST 346, MGT 301 or TMC 346 with D or better and APM 301 or STP 420 with D or better. If you have credit for OMT 570, you may not enroll in TMC 470.
TMC	**480**	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	3.		
TMC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-4		
TMC	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-7		Prerequisites:Must be a Tech Sci/Engr: NonDegree or BAS or BS or MS or MS Tech Plan AND have a 2.25 GPA or better.
TMC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-3		Prerequisites: Must be a Tech Sci: BAS or BS AND have 3.00 GPA or better.
TMC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1.		Pre Requisites: Graduate or Non Degree Students Only
TMC	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Dept of Tech Entrepreneurship and Innovation Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	**200**	Impact of Communications Technology on Society	Organizational issues and development of technical communication. Activities include research, evaluations, and presentation of oral arguments in support of positions.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Must have earned C or better in ENG 102, 105, or 108 or be currently enrolled
TWC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**301**	General Principles of Multimedia Writing	Introduces writing in a variety of media, understanding the consequences of integrating media, and effective editing techniques.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**347**	Written Communication for Managers	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	
TWC	**361**	Writing for Health Care Management	Strategies, formats, and techniques for effective writing and presentation of information for nursing professionals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: ENG 102, 105, or 108 with a C or better; RN-BSN students; Pre- or Co-requisite: NUR 391
TWC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**400**	Technical Communications	Planning and preparing technical publications and oral presentations based on directed library research related to current technical topics.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: College of Technology and Innovation BS or BSE student; senior academic level; 2.25 minimum cumulative GPA; ENG 102, 105 or 108 with C or better
TWC	**401**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 501, you may not enroll in TWC 401
TWC	**403**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**411**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: Students who have credit for TWC 511, may not enroll for TWC 411
TWC	**421**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites: If you have credit for TWC 521, you may not enroll in TWC 421
TWC	**431**	Principles of Technical Editing	Basic principles of technical editing (for print and electronic media) including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:May not enroll in TWC 431, if credit received in TWC 531
TWC	**443**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites:If you have taken TWC 543, you may not enroll in TWC 443
TWC	**444**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 544, you may not enroll in TWC 444
TWC	**445**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you received credit for TWC 545, you may not enroll in TWC 445
TWC	**446**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	L	Pre-requisites:If you have credit for TWC 546, you may not enroll in TWC 446
TWC	**451**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment. Credit is allowed for only TWC 451 or 551.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit for TWC 551, you may not enroll in TWC 451
TWC	**452**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Students who have credit for TWC 552, may not enroll in TWC 452
TWC	**453**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 453 or 553.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: If you have credit in TWC 553, you may not enroll in TWC 453
TWC	**454**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 454 or 554.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	C	Pre-requisites: If you have credit for TWC 554, you may not enroll in TWC 454
TWC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**490**	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**492**	Honors Directed Study		N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	1-6		
TWC	**493**	Honors Thesis		N	LEC	N	Z1	School of Letters & Sciences	School of Letters and Sciences	1-6	L	Pre-requisites: Must be an Honors student
TWC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
TWC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-3		
TWC	**501**	Principles of Technical Communication	Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 501 who have credit in TWC 401

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TWC	**503**	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**511**	Principles of Visual Communication	Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 511 who have credit in TWC 411
TWC	**521**	Principles of Writing with Technology	Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 521 who have credit in TWC 421
TWC	**531**	Principles of Technical Editing	Basic principles of technical editing for print and electronic media, including copyediting, reviews, standards, style, and project management.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: Graduate student (degree or non-degree seeking); Students may not enroll in TWC 531 who have credit in TWC 431
TWC	**543**	Proposal Writing	Develops persuasive strategies and themes for researching and writing professional proposals.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 543 who have credit in TWC 443
TWC	**544**	Manual and Instructional Writing	Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 544 who have credit in TWC 444
TWC	**545**	Computer Documentation	Introduces writing documentation for the computer industry.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 545 who have credit in TWC 445
TWC	**546**	Technical and Scientific Reports	Introduces strategies, formats, and techniques of presenting information to technical and scientific audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 546 who have credit in TWC 446
TWC	**547**	Business Reports	Introduces strategies, formats, and techniques of presenting information to business and other workplace audiences.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**551**	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment. Credit is allowed for only TWC 551 or 451.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 551 who have credit in TWC 451
TWC	**552**	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues. Credit is allowed for only TWC 552 or 452.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 552 who have credit in TWC 452
TWC	**553**	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present. Credit is allowed for only TWC 553 or 453.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Students may not enroll in TWC 553 who have credit in TWC 453
TWC	**554**	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America. Credit is allowed for only TWC 554 or 454.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		
TWC	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-12		
TWC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Letters & Sciences	School of Letters and Sciences	1-4		
UET	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**305**	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisite: Academic Level greater than or equal to Junior
UET	**331**	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequistes: CHM 113, PHY 112, and EST 210 OR BAS Electronic & Energy Systems student
UET	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		
UET	**411**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 411 or 511.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or Co-requisites: UET 331 and UET 417; Students with credit for UET 511, may not enroll in UET 411
UET	**415**	Electronic Manufacturing Engineering Principles	Electronic equipment design and fabrication principles and practice. Completion of electronics hardware design project and report.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	2-3		Pre-requisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**416**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 416 or 516.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-or co-requisites: UET 417; Credit for UET 516 or UET 416 only

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UET	**417**	Semiconductor Technology Practice	Lab-based design and execution of safe and effective semiconductor fabrication operations.	N	LEL	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: UET 331
UET	**418**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 418 or 518.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 518, may not enroll in UET 418
UET	**424**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisite: UET 331; Credit not allowed for UET 424 and UET 524
UET	**426**	Software Tools for the Semiconductor Industry	Introduces software tools commonly used in the semiconductor industry, such as SUPREM IV, PSPICE, VIEWLOGIC, and ICED.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		
UET	**432**	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: UET 331. Students who have credit for UET 532 may not enroll in UET 432.
UET	**437**	Process Control and Validation	Statistical process control and its application to IC fabrication. Design, control, and performance validation techniques throughout the manufacturing process. Lecture with Web support. Prerequisite: 300-level statistics course.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre/Co-requisite: UET 417 with C or better or Co-enrolled in UET 417
UET	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		
UET	**492**	Honors Directed Study		N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	1-6		
UET	**493**	Honors Thesis		N	LEC	N	Z1	College of Tech & Innovation	Department of Engineering Technology	1-6	L	Pre-requisites: Must be an Honors student
UET	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-7		Prerequisites: Undergraduate Technology and Innovation or Fulton Engineering student; Minimum 2.25 GPA; OR Technology and Innovation or Fulton Engineering graduate student
UET	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-3		
UET	**511**	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication. Credit is allowed for only UET 511 or 411. fee	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status. Students with credit for UET 411, may not enroll in UET 511
UET	**516**	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes. Credit is allowed for only UET 516 or 416.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Prerequisites: Graduate status. Credit for UET 416 or 516
UET	**518**	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions. Credit is allowed for only UET 518 or 418.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 518 and UET 418.
UET	**521**	Device Physics	Band structure of solids, electron hole-pairs, mobility, lifetime, fermilevel, pn junctions, diodes, and bipolar and MOS transistors.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**524**	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit not allowed for UET 524 and UET 424
UET	**532**	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	College of Tech & Innovation	Department of Engineering Technology	3.		Pre-requisites: Graduate status; Credit is not allowed for both UET 432 and UET 532.
UET	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**584**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre-requisites: Grad or Non Degree Grad student; 3.0 GPA or better. OR Senior level; Tech Sci student; 3.0 GPA or better
UET	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0

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UET	**592**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**593**	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Tech & Innovation	Department of Engineering Technology	1-12		Prerequisites: Must be Grad or Non Degree Grad student AND have a 3.0 GPA or better OR be a Senior AND a Tech Sci student AND have a 3.0 GPA or better.
UET	**594**	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**595**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Tech & Innovation	Department of Engineering Technology	1.		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Tech & Innovation	Department of Engineering Technology	1-4		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UET	**599**	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Tech & Innovation	Department of Engineering Technology	1-12		Pre Requisites: Graduate or Non Degree Students OR Undergrad TS/ES Senior with minimum GPA 3.0
UNI	**101**	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1.		
UNI	**150**	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	DIS	N	OPT	University College	Dean, University College	1.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	**250**	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	DIS	Y	OPT	University College	Dean, University College	1.		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	**110**	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	University Academic Success Programs	3.		
UNI	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	University Academic Success Programs	1-4		
UNI	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	University Academic Success Programs	1-4		
URB	**100**	Introduction to Urban and Metropolitan Studies	Introduction to study of urban governance. Explores city, civil society, and urban form from different cultures and historical periods. Credit is allowed for only URB 100 or 300.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**105**	Introduction to Urban Governance	Introduces American city growth from past to present. Examines the background of major urban issues emphasizing governance, management, and policy. Credit is allowed for only URB 105 or 305.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**220**	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**240**	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.	C	
URB	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**300**	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts. Credit is allowed for only URB 300 or 100.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
URB	**301**	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**302**	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**305**	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas. Credit is allowed for only URB 305 or 105.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
URB	**400**	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**405**	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 with C or better; URB 240 with C or better
URB	**406**	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		Pre-requisites: URB 220 or URB 240 with C or better
URB	**410**	Urban Leadership and Collaborative Skills	Emphasizes the changing roles of leadership and collaboration in a complex, diverse, and dynamic urban environment.	N	LEC	N	OPT	College of Public Programs	School of Public Affairs	3.		
URB	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Public Programs	School of Public Affairs	1-12		
URB	**493**	Honors Thesis		N	LEC	N	Z1	College of Public Programs	School of Public Affairs	1-6	L	Pre-requisites: Must be an Honors student
URB	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Public Programs	School of Public Affairs	1-4		
USL	**210**	Service Learning: Independent Placement	Provides community experiences and reflection opportunities that examine community needs, the importance of civic engagement, and the effects of social injustice on our society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals. See http://servicelearning.asu.edu for more details.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.	C	
USL	**410**	Service Learning: Independent Placement	Provides community experiences and reflection opportunities that examine community needs, the importance of civic engagement, and the effects of social injustice on our society. Through 100 dedicated service hours at a pre-approved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies), students directly serve a population in need or provide supporting activities that contribute to the greater good of our community. Classroom seminar activities provide forum for critical thinking and analysis for a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides real-world experiences that exercise advanced academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	N	OPT	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	3.		Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
USL	**402**	Service Learning:Tutoring Community Children	Tutoring and mentoring K-8 children attending under-resourced schools in an after-school or summer program. Design and implement fun learning activities focused on reading, writing, math, and other academic subjects. Process and learn from experience through reflective writing assignments. Fulfills community service hours required by some programs and scholarships. Honors credit available via contract. No exams. No experience with children required--training is provided.Any ASU students of any major and any level (freshman-senior and grad students) may enroll. Hours listed include 30-minutes travel time to/from internship site. Transportation from the Tempe campus is available. See http://servicelearning.asu.edu/internships for more details. Fee.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	3.	C	
USL	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-12		
USL	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Teacher Preparation, Division W	1-4		
VTN	**101**	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		
VTN	**102**	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.		Pre-requisties:VTN 101 with C or better
VTN	**201**	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 102 with a grade of C or better or currently enrolled
VTN	**202**	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5.	G	Pre-requisites:VTN 201 with a grade of C or better or currently enrolled
VTN	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**321**	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 202 with a grade of D or better, or currently enrolled
VTN	**322**	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3.		Pre-requisites:VTN 321 with D or better
VTN	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**107**	Introduction to Academic Writing for International Students	For students from non-English-speaking countries. Combines classroom and supplemental instruction with intensive reading, writing, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3.		Pre-requisites: TOEFL score of 0-559, ACT score of 0-18, SAT score of 0-460 or Accuplacer score of 0-4 (if test taken prior to May 12, 2009, then score 0-7)
WAC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	**101**	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0- 460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WPC	**101**	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		

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WPC	**301**	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	**302**	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1.		
WPC	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**492**	Honors Directed Study		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**493**	Honors Thesis		N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Pre-requisites: Must be an Honors student
WPC	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	**497**	Honors Colloquium		Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		
WPC	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Credit is allowed for only WST 100 or WST 300
WST	**191**	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**302**	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: AFS 200 (or WST 100 or 300) with D or better, or minimum 45 hours; Students who have credit for HST 335 or AFS 302 may not enroll in WST 302
WST	**313**	Women and Sexuality	Explores feminist theories about women's sexuality and the relationship of these theories and related research to women's experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**318**	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & G	Pre-requisites: AFH 200, WST 100, or WST 300 with D or better or minimum 45 earned hours; Credit only for AFH 318 or WST 318
WST	**340**	Gender, Science, and Technology	In-depth examination of the complex interrelationships of gender, science, technology, and society in a number of different contexts. Looks at the participation of women in scientific and technical fields both historically and cross-culturally, and addresses such topics as: gender segregation by status and discipline, feminist theories of gender and science, the conditions under which women have succeeded in the sciences, gender and biological determinism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 (or 300) with D or better or 30 minimum hours
WST	**345**	Gender, Religion, and Global Violence	In-depth study of forms of gendered violence in which religion plays a key role in either the practice or perpetuation of that form of violence in a myriad of cultures and contexts. Analyzes current responses and proposes new approaches to combating or redefining these forms of violence, emphasizing the need to understand and respect the religious and cultural contexts in which these actions occur.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 (or 300) with D or better or 30 minimum hours
WST	**360**	Women as Healers	Examines the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**364**	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: AFS 200 with D or better,or minimum 45 earned hours; Students who have credit for AFH 364, may not enroll in WST 364
WST	**365**	Women and International Health	Advanced study in the field of international health by illustrating the realities of women's lives outside of the industrialized world. Examines these issues using vivid ethnographic materials that present the scope of everyday life for women in other countries, as well as the tragic consequences of poverty, gender discrimination, and inadequate health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with a C or better, or a minimum or 30 credit hours
WST	**371**	Sex and the City: Women, Sexuality, and Popular Culture	Examines the changing construction of young, sexually autonomous women in the city by popular media in post-WWII America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: WST 100 or WST 300 with D or better
WST	**372**	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**373**	Latina/Chicana Issues	Examines the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**375**	Women and Social Change	Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**377**	History of American Feminist Thought	Explores the development of American feminist theory from its roots to 1975.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	H & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**378**	Global Feminist Theory	Global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	L & C & G	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**382**	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites:WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**410**	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	
WST	**413**	Lesbian, Gay, and Gender Studies	Explores lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from sociological, psychological, historical, and literary perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**420**	Women of Color in Film	Analyzes the history and representations of women of color in film and film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	
WST	**421**	Girlhood and Adolescence	Examines the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**440**	Politics of Women's Health	Interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**447**	Gender, Culture, and Development	Economic, cultural, and sociopolitical contexts for understanding women's roles related to health, family, work, education, and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	(L or SB) & G	Pre-requisites:May not sign up for WST 447 if received credit for SGS 454, or TCL 447
WST	**460**	Women and the Body	Interdisciplinary look at how representations of women's bodies permeate culture and affect a woman's sense of self.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**464**	Voices and Visions	Explores the contributions of visionary women in the humanities; topics vary from semester to semester.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**470**	Gender and Popular Culture	Interdisciplinary examination of how gender is constructed in popular cultural forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	HU & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**477**	Women and Violence	Global examination of forms of violence against women at the individual, institutional, and cultural levels, and efforts to control it.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.	SB & C	Pre-requisites: Must have completed either WST 100 or WST 300 with a grade of C or greater or be currently enrolled
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**492**	Honors Directed Study		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled

Subject	Catalog Nbr	Course Title Long	Descrlong	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	**547**	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Students who have credit for PUP 547 may not enroll in WST 547
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	**601**	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: degree-seeking graduate students only
WST	**602**	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**603**	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**610**	Research in Women's Health	Interdisciplinary research seminar on social issues in women's health, women's health care, and medical attitudes toward the female body.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisite: Degree-seeking graduate student
WST	**640**	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**684**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**690**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**691**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	**692**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**701**	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3.		Pre-requisites: Degree-seeking graduate students only
WST	**780**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**784**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**790**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	**791**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	**792**	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		

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WST	**795**	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1.		
WST	**799**	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Credit is allowed for only WST 100 or WST 300
WST	**194**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**220**	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	
WST	**276**	Feminist Foundations: Going to the Sources	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H	
WST	**294**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
WST	**333**	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**370**	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**376**	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	H & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**380**	Race, Gender, and Class	Explores the intersections of race, class, and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**385**	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: WST 100 or WST 300 with C or better
WST	**390**	Women and Religions	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**394**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**430**	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**431**	Women, Film, and Culture	Comparative international course explores ways feminist films have broken the mold in films focusing on women and gender.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**444**	Gender, Health, and Bodies	Exploresgender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB	Pre-requisites: WST 100 or WST 300 with C or better
WST	**457**	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**467**	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**472**	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	**473**	Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**475**	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU	
WST	**480**	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**483**	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	HU & G	Pre-requisites: WST 100 or WST 300 with C or better
WST	**484**	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		

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WST	**485**	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	3.	SB & C	Pre-requisites: WST 100 or WST 300 with C or better
WST	**492**	Honors Directed Study		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6		
WST	**493**	Honors Thesis		N	RSC	N	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-6	L	Pre-requisites: Must be an Honors student
WST	**494**	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**498**	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with a C or better or currently enrolled; ENG 101 or 105 with a C or better or currently enrolled
WST	**499**	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-3		
WST	**580**	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**590**	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**591**	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-12		
WST	**598**	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Division of Humanities, Arts, and Cultural Studies	1-4		
WST	**100**	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Credit is allowed for only WST 100 or WST 300
WST	**300**	Women and Gender in Contemporary Society	Interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law.	N	LEC	N	OPT	School of Letters & Sciences	School of Letters and Sciences	3.	SB & C	Students may not enroll in WST 300, if they have received a D or better in WST 100
YDL	**201**	Introduction to Youth Studies	Introduces a perspective on the everyday lives of youth in regard to experience, sex, age, relational context, and identity.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**210**	Urban Youth and Youth Studies	Explores the lives of young people from 12 to 22 years old in urban neighborhoods, communities, and cities.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**301**	Adolescent and Youth Development Leadership	Applies theory and research about youth, including how findings can be used and how theories facilitate behavior understanding.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		
YDL	**450**	Youth Policy	Examines various federal and state policies designed for youth, how and why policies for youth are constructed.	N	LEC	N	OPT	College of Public Programs	School of Community Resources and Development	3.		